GE
159 Plastics Avenue
Pittsfield, MA 01201
USA

Transmitted Via Overnight Courier

July 5, 2005

Mr. William P. Lovely, Jr. (MC HBO)
USEPA – New England
One Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Re: GE-Pittsfield/Housatonic River Site
Former Oxbow Areas A and C (GECD410)
Final Removal Design/Removal Action Work Plan

Dear Mr. Lovely:

Enclosed for your review is GE's *Final Removal Design/Removal Action Work Plan for Former Oxbow Areas A and C.*

Please call Dick Gates if you have any questions about this work plan.

Sincerely,

Andrew T. Silfer /DAJ

Andrew T. Silfer, P.E.
GE Project Coordinator

Enclosure
V:\GE_Pittsfield_CD_Former_Oxbow_Areas_A_and_C\Reports and Presentations\Final RDRA WP\41352196CvrLtr.DOC

cc: Tim Conway, EPA
Holly Inglis, EPA
Rose Howell, EPA*
Dean Tagliaferro, EPA
K.C. Mitkevicius, USACE (compact disk)
Susan Steenstrup, MDEP (2 copies)
Anna Symington, MDEP*
Robert Bell, MDEP*
Thomas Angus, MDEP
Linda Palmieri, Weston (hard copy, compact disk)
Nancy E. Harper, MA AG*
Dale Young, MA EOEA*
Mayor James Ruberto, City of Pittsfield
Pittsfield Department of Health
Michael Carroll, GE*
Richard Gates, GE
Roderic McLaren, Esq., GE*
James Nuss, BBL
James Bieke, Goodwin Procter LLP
Property Owner – Parcels I8-23-6/I9-5-1/I9-5-2
Property Owner – Parcel I8-23-4
Property Owner – Parcel I8-23-9
Property Owner – Parcel I8-23-10
Property Owner – Parcel I8-23-11
David J. Baker, ExxonMobil Corporation
George W. Crimmins, McCusker, Anselmi, Rosen, Carvelli & Walsh, P.A.
Public Information Repositories
GE Internal Repository

* *without attachments*

REPORT

Final Removal Design/ Removal Action Work Plan for Former Oxbow Areas A and C

General Electric Company
Pittsfield, Massachusetts

July 2005

BBL
BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

Table of Contents

Figures

Attachments

1. Introduction

1.1 General

On October 27, 2000, a Consent Decree (CD) executed in 1999 by the General Electric Company (GE), the United States Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection (MDEP), and several other government agencies was entered by the United States District Court for the District of Massachusetts. The CD requires (among other things) the performance of Removal Actions to address polychlorinated biphenyls (PCBs) and other hazardous constituents present in soil, sediment, and groundwater in several Removal Action Areas (RAAs) located in or near Pittsfield, Massachusetts. These RAAs are part of the GE-Pittsfield/Housatonic River Site. For each Removal Action, the CD and accompanying *Statement of Work for Removal Actions Outside the River* (SOW) (Appendix E to the CD) establish Performance Standards that must be achieved, as well as specific work plans and other documents that must be prepared to support the response actions for each RAA. For most of the Removal Actions, these work plans/documents include the following: Pre-Design Investigation Work Plan, Pre-Design Investigation Report, Conceptual Removal Design/Removal Action (RD/RA) Work Plan, and Final RD/RA Work Plan.

For the Former Oxbow Areas A and C RAA, considered one of the Former Oxbow Areas under the CD and SOW, GE has previously submitted the following documents to satisfy those requirements of the CD and SOW:

- *Pre-Design Investigation Work Plan for the Former Oxbow Areas A and C Removal Action* (PDI Work Plan) (September 2002);

- *Addendum to Pre-Design Investigation Work Plan* (PDI Work Plan Addendum) (February 2003);

- *Pre-Design Investigation Report for the Former Oxbow Areas A and C Removal Action* (PDI Report) (August 2003);

- Proposal for Additional Supplemental Pre-Design Soil Sampling (Supplemental Sampling Proposal) (November 2003);

- Supplemental PDI Report and Additional Sampling Proposal (Supplemental Report) (May 2004);

- Additional Supplemental PDI Report (Additional Supplemental Report) (October 2004); and

- *Conceptual Removal Design/Removal Action Work Plan for Former Oxbow Areas A and C* (Conceptual Work Plan) (January 2005).

The Conceptual Work Plan presented: (1) evaluations of both the PCB and the non-PCB constituents listed in Appendix IX of 40 CFR 264 (excluding pesticides and herbicides), plus benzidine, 2-chloroethyl vinyl ether, and 1,2-diphenylhydrazine (Appendix IX+3) data under existing conditions to assess the need for soil-related removal actions; (2) a conceptual proposal for soil-related removal actions, where necessary; and (3) revised evaluations of PCBs and other Appendix IX+3 constituents in soil under post-remediation conditions (where relevant) to demonstrate that the proposed removal actions will achieve the applicable Performance Standards under the CD and SOW. On April 6, 2005 EPA issued a letter to GE conditionally approving the Conceptual Work Plan and requiring submittal of the Final Work Plan by July 6, 2005.

This *Final RD/RA Work Plan for Former Oxbow Areas A and C* (Final Work Plan) presents a summary of the pre-design investigation activities performed at the Former Oxbow Areas A and C RAA, a summary of the PCB and Appendix IX+3 evaluation procedures and results, design information, an implementation plan, a discussion regarding Contractor selection, details regarding post-construction activities, and a section concerning the schedule of construction activities. Additional details regarding the specific components of this Final Work Plan are provided in Section 1.3.

1.2 Description of Former Oxbow Areas A and C

The Former Oxbow Areas A and C RAA encompasses an area of approximately eight acres generally located to the south of the Housatonic River, beginning approximately 250 feet downstream of the Lyman Street Bridge (Figure 1-1). Certain portions of this area originally consisted of land associated with oxbows and low-lying areas of the Housatonic River. Rechannelization and straightening of the Housatonic River in the early 1940s by the City of Pittsfield and the United States Army Corps of Engineers (USACE) separated several of these oxbows and low-lying areas from the active course of the river. These oxbows and low-lying areas were subsequently filled with various materials from a variety of sources, resulting in the current surface elevations and topography. As shown on Figure 1-2, Former Oxbow Area A occupies the central and southwest portion of the RAA, while Former Oxbow Area C occupies the northeast portion of the RAA.

The RAA as defined in the SOW was composed of the following four properties:

- Parcel I8-23-6;
- Parcel I8-23-9;
- Parcel I8-23-10; and
- Parcel I9-5-1.

Based on the results of other sampling activities performed by EPA, GE, and others in proximity to the RAA as defined in the SOW, the boundaries of that RAA were extended to include the following additional property, as approved by EPA:

- Parcel I9-5-2.

In addition, as approved EPA, and as discussed further below, the following two parcels were added to the RAA for the purpose of addressing PCBs only:

- Parcel I8-23-4; and
- Parcel I8-23-5.

The above-referenced seven properties are identified on Figure 1-2. Each of these properties is non-GE-owned. The largest of these properties is Parcel I8-23-6, the majority of which is undeveloped and covered with grass and low brush. The southwestern portion of this parcel is paved and developed. For the purpose of developing appropriate response actions pursuant to the CD and SOW, these undeveloped and developed portions of Parcel I8-23-6 were evaluated as separate "recreational" and "commercial" averaging areas, respectively. Parcels I9-5-1 and I9-5-2 are smaller recreational properties with grass and trees, located at the southeast part of the RAA adjacent to Parcel I8-23-6. Parcels I8-23-9 and I9-23-10 are commercial properties located adjacent to each other and Parcel I8-23-6. As mentioned above, the RAA boundary defined in the SOW was expanded to include Parcel I9-5-2 based on the results of PCB sampling performed there by GE (with analysis performed by EPA) during the pre-design investigation (Figure 1-2).

As also shown on Figure 1-2, the former Elm Street Mobil station is located on Parcel I8-23-5, at the southwest boundary of the RAA as defined in the SOW. Several soil and groundwater response actions on that site (designated as a separate disposal site under the Massachusetts Contingency Plan (MCP)) have been conducted

by Exxon Mobil Corporation (ExxonMobil) since 1991 pursuant to the MCP under an Administrative Consent Order (ACO) with the MDEP to address petroleum-related compounds related to the former use of this property. Additional data collected for ExxonMobil prior to the preparation of the PDI Report, however, showed that PCBs are present on that parcel and on adjacent Parcel I8-23-4 to the west. As proposed in the PDI Report and approved by EPA, GE performed additional PCB sampling at Parcels I8-23-5 and I8-23-4 to supplement the previous investigations performed and provide the appropriate grid-based characterization of PCBs at these parcels. Based on that characterization, and on ExxonMobil's ongoing activities under MDEP oversight concerning the investigation and remediation of non-PCB-compounds, GE proposed, and EPA approved, adding these parcels to the RAA for purposes of addressing PCBs only. Therefore, Parcels I8-23-5 and I8-23-4 were evaluated in the Conceptual Work Plan to determine the need for remediation to address PCBs only.

1.3 Contents of Final Work Plan

Section 3.4 of the SOW contains specific requirements regarding the information required in Final Work Plans, including:

- Results of pre-design studies/investigations;
- An evaluation of the areas and depths subject to removal actions to meet the PCB-related Performance Standards set forth in the SOW;
- An evaluation of the need for additional removal actions to address non-PCB constituents and (if needed) the type of such removal actions;
- A further description of the activities necessary to meet the Performance Standards for natural resource restoration/enhancement activities;
- An evaluation of other issues that may affect the type and extent of removal actions (e.g., groundwater, non-aqueous phase liquid [NAPL]);
- Design assumptions and parameters;

- Identification of Applicable or Relevant and Appropriate Requirements (ARARs) in accordance with Attachment B of the SOW;

- Detailed design of the removal actions;

- Description of other implementation details concerning performance of the removal actions;

- Summary of anticipated Post-Removal Site Control activities following completion of the Removal Action;

- Identification of the Removal Action team, including key personnel, roles and responsibilities, and lines of authority;

- Process for selection of Removal Action Contractor (if not already selected);

- Schedule for implementation of Removal Action;

- Construction Quality Assurance Plan (CQAP); and

- Project closeout requirements.

In addition, GE will provide other pertinent information regarding these remedial activities to EPA in a supplemental information package as a follow up to this Final RD/RA Work Plan as further described in Section 9.

1.4 Scope and Format of Final Work Plan

To satisfy the requirements identified in Section 1.3 above, the remainder of this Final Work Plan is presented in eight sections. The title and a brief overview of each section are presented below:

Section 2 – Summary of Pre-Design Investigation Activities, describes the pre-design soil investigation activities conducted by GE at Former Oxbow Areas A and C, the results of which were used to determine the

need for and extent of removal actions to address PCBs and Appendix IX+3 constituents in soil at the seven properties located within this RAA.

Section 3 – Summary of PCB and Appendix IX+3 Evaluation Procedures, provides an overview of the applicable PCB and Appendix IX+3 Performance Standards for recreational properties, and describes the procedures used to evaluate these constituents in soil at these properties under existing and, where necessary, post-remediation conditions.

Section 4 – Summary of PCB and Non-PCB Evaluation Results, presents an overall summary of the PCB and Appendix IX+3 evaluations for the properties located within Former Oxbow Areas A and C, as presented in the Conceptual Work Plan, as well as the removal actions proposed to achieve the Performance Standards (i.e., soil removal/replacement) for each property.

Section 5 – Design Information, describes additional design-related information associated with the removal actions identified in Section 4. Such information includes technical plans, specifications, and drawings; information regarding performance of soil removal activities; an evaluation of the potential impacts to the flood storage capacity in this area and the need for compensatory flood storage; identification of site-specific ARARs; and a description of the procedures to be implemented to ensure attainment of those ARARs.

Section 6 – Contractor Selection, discusses the process for selecting the Remedial Action Contractor.

Section 7 – Implementation Plan, discusses certain site-specific implementation components, including identification of the project participants, Contractor submittal requirements, project-specific site preparation and construction-related components, and the perimeter air monitoring proposed during the performance of the removal actions.

Section 8 – Post-Construction Activities, identifies the various activities to be performed following implementation of remedial actions, including project closeout activities (i.e., pre-certification inspection and preparation of a Final Completion Report) and Post-Removal Site Control activities.

Section 9 – Schedule, identifies the anticipated schedule for performance of the proposed remedial actions and subsequent reporting activities.

The discussions in the above-referenced sections are supported by tables, figures, and other evaluations presented in several attachments, as described in subsequent sections of this Final Work Plan.

Finally, it should be noted that this Final Work Plan evaluates the need for and scope of removal actions to achieve the soil-related Performance Standards set forth in the CD and SOW. Groundwater at Former Oxbow Areas A and C is being addressed as part of GE's groundwater-related activities for Groundwater Management Area (GMA) 5 pursuant to the CD and SOW. Eight wells located within Former Oxbow Areas A and C were installed and have been sampled as part of the groundwater-related activities at GMA 5. At the present time, these activities consist of the performance of an interim groundwater monitoring program at GMA 5. As further discussed in section 7.5.1, GE proposes to decommission three wells, A-1, C-1, and C-2, that were installed at Former Oxbow Areas A and C prior to the GMA 5 program and are not currently sampled or considered to be necessary in the future for GMA 5.

2. Summary of Pre-Design Investigation Activities

2.1 General

The removal actions presented in this Final Work Plan are based on the results of extensive pre-design investigation activities performed by GE and EPA at Former Oxbow Areas A and C. In addition, the removal actions are based on PCB data collected by ExxonMobil at the former Elm Street Mobil Station (Parcel I8-23-5) which, as described in Section 1.2 above, is now part of the expanded RAA. Since Section 2 of the Conceptual Work Plan provided a detailed description of the pre-design investigation activities, as well as the corresponding data tables presenting the results of those investigations, only a summary of those investigations is provided herein.

2.2 Summary of Pre-Design Soil Investigations

The pre-design investigation activities for Former Oxbow Areas A and C consisted of the following:

- Historical soil investigations prior to March 2003 and not associated with the pre-design investigation activities proposed in GE's PDI Work Plan (September 2002) or PDI Work Plan Addendum (February 2003).

- Pre-design activities conducted by GE between March 2003 and August 2004, generally including the collection and analysis of soil samples for analysis of PCBs, and for certain of those samples, other Appendix IX+3 constituents.

- Investigation activities conducted by EPA at Former Oxbow Areas A and C during GE's pre-design investigations as well as on prior occasions. The validated results of these EPA analyses were provided to GE as part of a data exchange agreement between GE and EPA. These data have also been considered in the removal action evaluations for this RAA (excluding the sample results rejected in EPA's data validation process).

- Investigation activities conducted by ExxonMobil at the former Elm Street Mobil Station. These activities included the collection of soils samples for PCB analysis and were presented in an attachment to the PDI Report.

- Additional Sampling found to be necessary at the former Elm Street Mobil Station based on surface sampling performed on behalf of ExxonMobil. Sampling also was conducted south of the Elm Street Mobil Station in the city-owned right-of-way. Results were presented in the Supplemental Report dated May 19, 2004.

- Performance of additional supplemental sampling in areas in which additional data were needed to support future RD/RA evaluations within the RAA. Specifically, GE performed this sampling where the RAA boundaries were extended to include Parcel I9-5-2, and Parcels I8-23-4 and I8-23-5 for PCBs only as described in Section 1.2 above. Additionally, sampling was conducted in two areas of Parcel I8-23-6 for semi-volatiles organic compounds (SVOCs) where levels of polycyclic aromatic hydrocarbons (PAHs) were slightly elevated. GE presented the results in the Additional Supplemental PDI Report dated October 29, 2004.

The results of the pre-design activities listed above were the basis for the PCB and other Appendix IX+3 evaluations presented in the Conceptual Work Plan. The corresponding data summary tables providing the results of these sampling activities were provided in Appendix B of the Conceptual Work Plan.

3. Summary of PCB and Appendix IX+3 Evaluation Procedures

3.1 General

This section of the Final Work Plan summarizes the procedures used by GE to determine the need for removal actions to achieve the PCB and other Appendix IX+3 Performance Standards specified in the SOW for the averaging areas located within Former Oxbow Areas A and C. This section provides an overview of the PCB evaluation procedures (Section 3.2), followed by an overview of the evaluation procedures for other Appendix IX+3 constituents (Section 3.3). In addition, it includes a summary of the Performance Standards under the CD and SOW related to natural resource restoration/enhancement activities within Former Oxbow Areas A and C (Section 3.4).

3.2 Summary of PCB Evaluation Procedures

This section provides and overview of the PCB evaluation procedures for Former Oxbow Areas A and C, including: (1) a description of the applicable PCB-related Performance Standards for this RAA; (2) the current status regarding obtaining Grants of Environmental Restrictions and Easements (EREs) for the properties located in Former Oxbow Areas A and C; (3) an overview of PCB evaluation procedures for each averaging area; and (4) an overview of the utility corridor PCB evaluation procedures.

3.2.1 PCB-Related Performance Standards

For the Former Oxbow Areas at the CD Site, which include Former Oxbow Areas A and C, the Performance Standards related to the presence of PCBs in soil are set forth in Paragraph 26 of the CD and Section 2.3.2 of the SOW. The pertinent Performance Standards related to the presence of PCBs in soil at Former Oxbow Areas A and C may be summarized as follows:

- GE must make "best efforts" (as defined in the CD) to obtain EREs at properties not owned by GE, which are all of the properties within this RAA. If an ERE cannot be obtained, GE must implement a Conditional Solution. The scope of soil-related response actions at each of the properties in Former Oxbow Areas A and

C therefore is dependent on whether an ERE is obtained or a Conditional Solution will be implemented. GE has attempted to obtain EREs at each of the seven parcels included in this RAA, as discussed below.

- For the commercial averaging areas (which consist of Parcels I8-23-4, I8-23-5, I8-23-9 and I8-23-10, and the commercial portion of Parcel I8-23-6), GE must achieve the following standards:

  – For areas where an ERE is obtained, if the spatial average PCB concentration in the top foot of soil in the unpaved portion of the area exceeds 25 ppm, GE must remove and replace soils as necessary to achieve that average concentration in such portion. For the paved portion of the area, if the spatial average PCB concentration exceeds 25 ppm in the top foot of soil, GE must either remove and replace soils as necessary to achieve that spatial average concentration or enhance the pavement in such portion in accordance with the specifications for pavement enhancement in the SOW. In addition, considering both paved and unpaved portions together, GE must remove/replace soils as necessary to achieve a spatial average PCB concentration of 200 ppm in the 1- to 6-foot depth increment and must install an engineered barrier if the remaining spatial average PCB concentration in the 0- to 15-foot depth increment exceeds 100 ppm.

  - For areas where an ERE cannot be obtained, GE must implement a Conditional Solution, which includes soil removal/replacement as necessary to achieve spatial average PCB concentrations of 25 ppm in both the top foot of soil (considering paved and unpaved portions together) and the top 3 feet of soil and 200 ppm in the 1- to 6-foot depth increment, and installation of an engineered barrier if the remaining spatial average PCB concentration in the 0- to 15-foot depth increment exceeds 100 ppm.

- For the recreational averaging areas (which consist of Parcels I9-5-1 and I9-5-2, and the recreational portion of parcel I8-23-6), GE must achieve the following standards:

  - For areas where an ERE is obtained, GE must remove/replace soils as necessary to achieve spatial average PCB concentrations of 10 ppm in the top foot and 15 ppm in the 1- to 3-foot depth increment, and must install an engineered barrier if the remaining spatial average PCB concentration in the 0- to 15-foot depth increment exceeds 100 ppm.

- For areas where an ERE cannot be obtained, GE must implement a Conditional Solution which includes soil removal/replacement to achieve a spatial average PCB concentration of 10 ppm in both the top foot and the top 3 feet of soil, and installation of an engineered barrier if the remaining spatial average PCB concentration in the 0- to 15-foot depth interval exceeds 100 ppm.

- Further, at each of the above areas that exceeds 0.5 acre in size, if GE elects to consider the entire area as an averaging area, GE must ensure the removal of all soils in the top foot in unpaved portions that contain PCB concentrations greater than 125 ppm at commercial areas and 50 ppm at recreational areas – the "not-to-exceed" (NTE) levels. Alternatively, GE may establish averaging areas that do not exceed 0.5 acre in size or may propose other specific averaging areas to EPA for approval, in which case the above NTE PCB levels will not apply.

- In addition, at all areas where subgrade utilities potentially subject to emergency repair requirements are present, if the spatial average PCB concentration in the utility corridor exceeds 200 ppm, GE must evaluate whether any additional response actions are necessary. Further, if subgrade utilities are installed, repaired, or replaced, GE must ensure that the spatial average PCB concentration in the backfill material is less than 25 ppm at commercial areas and less than 10 ppm in the top 3 feet and 25 ppm at greater depths for recreational areas.

3.2.2 Status of EREs

As discussed above, Former Oxbow Areas A and C include seven parcels (including Parcels I8-23-4 and I8-23-5 for PCBs only). None of these parcels is owned by GE. The common owner of Parcels I8-23-6, I9-5-1 and I9-5-2 has advised GE that he has decided not to execute EREs for these parcels. Therefore, a Conditional Solution will be implemented at these parcels. Similarly, the owners of Parcels I8-23-9 and I8-23-10 have advised GE that they have decided not to execute EREs for these properties. Thus, GE also will implement Conditional Solutions at these parcels. The owners of Parcel I8-23-5, which is the former Elm Street Mobil Station, and adjacent Parcel I8-23-4, have advised GE that they are interested in executing EREs for their properties..

3.2.3 Area-Specific PCB Evaluation Procedures

Section 3.2.3 of the Conceptual Work Plan detailed the general procedures used to evaluate PCB concentrations in soil on an area-specific basis for the properties located within Former Oxbow Areas A and C. These procedures were established in Attachment E to the SOW (Protocols for PCB Spatial Averaging), and basically involved the following steps: (1) for areas where NTE levels apply, comparing the discrete PCB concentrations in the top foot of soil in unpaved areas to the applicable NTE levels; (2) comparing the existing spatial average PCB concentrations for the relevant depth increments at each area to the applicable PCB Performance Standards; (3) at areas where there were exceedances of the applicable NTE levels or other Performance Standards, developing a remediation proposal (soil removal) to address those exceedances; and (4) repeating the evaluations for those areas in their proposed post-remediation condition to ensure that the proposed remediation would achieve the Performance Standards. The evaluation results were presented in Section 4 of the Conceptual Work Plan on an area-by-area basis, with supporting documentation (i.e., Theissen polygon maps and averaging tables) provided in Appendix D of that document.

In addition, EPA required in its April 6, 2005 conditional approval letter that GE provide in the Final RD/RA Work Plan a further description of the role that previous PCB soil removal played in the evaluation of Parcel I8-23-6 (Recreational). Specifically, the previous soil sampling and removal was performed by GE as part of the Immediate Response Actions (IRAs) performed between October 1995 and October 1997 at an area located at the northeastern portion of this parcel. This removal involved the removal of approximately 6 inches of soil from an area of approximately 15,600 square feet. The total removal volume was approximately 330 cy due to the need to over-excavate in certain areas where concrete debris was encountered.

In the evaluations set forth in the Conceptual Work Plan, however, GE conservatively utilized original sampling data (as opposed to backfill concentrations) when it evaluated existing PCB concentrations for this area. The reason for this approach is as follows. During the PDI, surface soil samples (0- to 1-foot depth increment) collected at four locations within or adjacent to the previous removal area exceeded the NTE level of 50 ppm. This is mainly because of the influence of the soil concentrations from 6 to 12inches deep that was not previously removed. Further, because the performance standard for PCBs was not met primarily due to PCB results observed in the 0- to 3-foot depth interval at the RAA11-C2 location within the previous removal area, removal/replacement was needed at the 1- to 2-foot depth interval. Collectively, these activities would result in the removal of soil from the upper 0- to 1-foot depth increment over the majority of the previous removal area, regardless of whether original sample results or clean backfill concentrations were used in the evaluations.

3.2.4 Utility Corridor Evaluations

As discussed in Section 3.2.4 of the Conceptual Work Plan, subsurface utilities potentially subject to emergency repairs were also subject to additional evaluation activities. Specifically, the corridor associated with each such utility was to be evaluated by calculating the spatial average PCB concentration for each such corridor using the procedures described in Section 3.2.4 of the Conceptual Work Plan, and then comparing that average concentration to the PCB Performance Standard of 200 ppm for utility corridors. At this RAA, however, there was only one sample, RAA11-S17 (0- to 1-foot depth increment) where a PCB concentration was greater than 200 ppm in any of the individual samples collected within the utility corridors. Further, because the PCB concentration in the RAA11-S17 sample is above the NTE level, removal is planned at that location. As a result, as described in Section 4.10 of the Conceptual Work Plan, there will be no PCB results greater than 200 ppm in any of the utility bands, so spatial averaging was not needed in these bands.

3.3 Summary of Appendix IX+3 Constituent Evaluation Procedures

This section provides an overview of the applicable Performance Standards for non-PCB Appendix IX+3 constituents in soil and the procedures used to assess achievement of those standards. As with PCBs, the other Appendix IX+3 constituents were evaluated first for each evaluation area in its existing condition. For each evaluation area where the applicable Performance Standards are not met, removal actions were proposed and post-remediation conditions were evaluated to ensure achievement of the Performance Standards.

3.3.1 Applicable Performance Standards

The applicable Performance Standards for non-PCB Appendix IX+3 constituents in soil at Former Oxbow Areas A and C are included in Section 2.3.2 of the SOW. These standards include the following:

- For dioxins and furans, total TEQ concentrations must be calculated using the Toxicity Equivalency Factors (TEFs) developed by the World Health Organization (WHO) (van den Berg J. et al., *Environ. Health Perspectives*, Vol. 106, No. 12, Dec. 1998). Either the maximum TEQ concentration or the 95% percent upper confidence limit on the mean (95% UCL) of the TEQ data must be below certain PRGs developed or approved by EPA for dioxin/furan TEQs. These PRGs are: for commercial areas, 5 parts per billion (ppb) in the top foot of soil and 20 ppb in subsurface soil; and for recreational areas, 1 ppb in the top foot and 1.5 ppb in the 1- to 3-foot depth interval. In addition, EPA has previously requested in a May 24, 2002 comment letter on the Conceptual RD/RA Work Plan for the Newell Street Area I (another of the Former

Oxbow Areas under the CD and the SOW), that GE also compare the maximum or 95% UCL TEQ concentrations to the following TEQ criteria, although these are not Performance Standards specified in the CD or SOW: 5 ppb for the 0- to 3-foot depth increment at commercial areas that will not have EREs; 1 ppb for the 0- to 3-foot depth increment at recreational areas that will not have EREs; and 20 ppb for soils below 3 feet at all recreational areas.

- For other non-PCB constituents, any combination of the following must be achieved: (1) maximum concentrations of individual constituents that do not exceed the Screening PRGs established or approved by EPA (as discussed below); or (2) for the remaining constituents, average concentrations that either: (a) do not exceed the MCP Method 1 soil standards (or Method 2 standards, if developed); or (b) are shown through an area-specific risk evaluation to have cumulative risk levels that do not exceed (after rounding) an Excess Lifetime Cancer Risk (ECLR) of 1×10^{-5} and a non-cancer Hazard Index (HI) of 1.

3.3.2 Overview of Evaluation Process

The initial task performed in the evaluation of the non-PCB constituents in soil at Former Oxbow Areas A and C was to assess such constituents in soil at each averaging area under existing conditions, based on all available Appendix IX+3 data collected from that area, without considering PCB-related remediation. This assessment consisted of several steps:

- First, a screening step was conducted, which generally involved comparison of the maximum concentrations of all detected constituents (other than dioxin/furan TEQs) to the applicable PRGs developed by EPA Region 9 (as set forth in Exhibit F-1 to Attachment F of the SOW) or certain surrogate PRGs previously approved by EPA. Additional details regarding this evaluation step were provided in Section 3.3.3 of the Conceptual Work Plan.

- Second, for dioxin/furan TEQs, the maximum concentration or 95% UCL (whichever is lower) at each area and relevant depth increment was compared to the applicable dioxin/furan PRG described above (as well as those additional criteria requested by EPA, where appropriate). Additional details regarding this evaluation step were provided in Section 3.3.4 of the Conceptual Work Plan.

- Third, for those constituents (other than dioxin/furan TEQs) that were not screened out in Step 1, the existing average concentrations of each such constituent were calculated for the same depth increments used for the required PCB evaluations, as specified in Section 3.2.1. These average concentrations were then compared to the MCP Method 1 soil standards for such constituents. Additional details regarding this evaluation step were provided in Section 3.3.5 of the Conceptual Work Plan.

- Fourth, for averaging areas where there were exceedances of the Method 1 soil standards in any depth increment but such exceedances were not significantly above the Method 1 soil standards, an area-specific risk evaluation was conducted for the same constituents evaluated in Step 3 and in accordance with the procedures specified in the SOW for such evaluations. Additional details regarding this evaluation step were provided in Section 3.3.6 and Appendix D of the Conceptual Work Plan.

GE notes that in the Conceptual Work Plan it compared average non-PCB Appendix IX+3 concentrations (other than dioxin/furan TEQs) to the currently-effective MCP Method 1 standards. For each of the evaluation areas at this RAA, certain constituents exceeded the current Method 1 standards and a risk evaluation was required. In certain reports for other areas filed since the Conceptual Work Plan, GE has compared the average soil concentrations to the draft "Wave 2" Method 1 standards proposed in September 2004. Some of those proposed Wave 2 standards were revised in May 2005. For Former Oxbow Areas A and C, had GE performed the evaluations in the Conceptual Work Plan using the Wave 2 standards, certain constituents still would have exceeded the Method 1 standards and risk evaluations still would have been required. Moreover, as the Method 1 standards do not play a role in the risk evaluations, the outcome of the risk evaluations would not have been affected.

At the one averaging area where the evaluations in the Conceptual Work Plan indicated the need for additional remediation to address non-PCB Appendix IX+3 constituents in soil, a remediation proposal was developed, consisting of removal/replacement of soil containing the samples that had concentrations causing the exceedance(s) of the applicable standards. That area showed significant exceedances of the Method 1 soil standards such that an area-specific risk evaluation of existing conditions was not deemed warranted. For that area, an evaluation was then conducted of post-remediation conditions. This evaluation consisted of repeating Steps 2 through 4 of the above-described process, as necessary, to demonstrate that the proposed remediation will achieve the applicable Performance Standards for non-PCB Appendix IX+3 constituents. The specific procedures used to take account of the proposed soil removal/replacement in these post-remediation evaluations were discussed in Section 3.3.7 of the Conceptual Work Plan. The evaluation results were summarized in

Section 4 of the Conceptual Work Plan, with supporting documentation provided in Appendices C (evaluation tables) and D (risk assessment) of that document.

3.4 Performance Standards for Natural Resource Restoration/Enhancement Activities

Attachment I to the SOW sets forth the Performance Standards and other requirements for the natural resource restoration/enhancement activities at riparian land located within the Housatonic River watershed outside the GE Plant Area. In total, GE is required to create a total of approximately 9.75 acres of floodplain forest habitat and approximately 2.25 acres of freshwater palustrine wetlands in such riparian area(s). At GE's option, these natural resource restoration/enhancement activities can potentially include Former Oxbow Areas A and C, under the following provisions. GE has the option of creating such habitat either (a) entirely at a suitable Off-Site Restoration Area or (b) using a combination of such an area and Former Oxbows Areas A and C, provided that at least six of the 12 habitat/restoration enhancement acres are created at Former Oxbows A and C. GE has elected not to use Former Oxbow Areas A and C for the establishment of a minimum six acres of habitat/ restoration enhancement area.

4. Summary of PCB and Non-PCB Soil Evaluation Results

4.1 General

Section 4 of the Conceptual Work Plan presented the results of the area-specific PCB and Appendix IX+3 evaluations that were performed in accordance with the evaluation procedures summarized in Section 3 of that document. The Conceptual Work Plan presented the following information for each averaging area located within Former Oxbow Areas A and C:

- Description of area and identification of Performance Standards;
- Evaluation of existing conditions with respect to PCBs and discussion of the need for remediation to address PCBs;
- Evaluation of existing conditions with respect to other Appendix IX+3 constituents and discussion of the need for remediation to address these constituents;
- Description of proposed remediation actions (shown on Figure 4-1 of the Conceptual Work Plan);
- Evaluation of post-remediation conditions with respect to PCBs; and
- Evaluation of post-remediation conditions with respect to other Appendix IX+3 constituents, where required.

Following discussion of above-referenced area-specific evaluations, the Conceptual Work Plan presented a utility corridor data summary for PCBs. Finally, the Conceptual Work Plan presented an overall summary of the removal actions for Former Oxbow Areas A and C, including soil removal volumes.

In support of the PCB and Appendix IX+3 evaluations, the Conceptual Work Plan included backup documentation for the evaluations. Specifically, the spatial averaging tables and Theissen polygon maps developed in support of the area-specific PCB evaluations were presented in Appendix B of the Conceptual Work Plan, while the evaluation tables developed in support of the Appendix IX+3 evaluations were presented in Appendix C of that document. Finally, Appendix D of the Conceptual Work Plan presented the area-specific risk evaluations.

4.2 Overall Summary

Based on the evaluations presented in Section 4 of the Conceptual Work Plan, that document proposed removal actions consisting of soil removal/replacement at the recreational portion of Parcel I8-23-6 and at Parcel I9-5-1 at Former Oxbow Areas A and C. As further described below, the removals at Parcel I9-5-1 will be related to PCBs only while the removals at the recreational portion of Parcel I8-23-6 will be related to both PCBs and other Appendix IX+3 constituents as discussed below. In addition, as directed by EPA in its April 6, 2005 conditional approval letter, further description of the role that the previous PCB removals played in the evaluation of the recreational portion of Parcel I8-23-6 is provided below.

4.2.1 PCB Evaluation Summary

Table 4-1 below lists the post-remediation average PCB concentration for each depth increment subject to evaluation at each averaging area, as presented in the Conceptual Work Plan, as well as the applicable PCB Performance Standard for that depth increment. Table 4-1 also lists the currently estimated volume of soil removal. For the recreational portion of Parcel I8-23-6, the quantities of soil removal shown include soil being removed to address non-PCB constituents as well as PCBs.

Table 4-1

Final Average PCB Concentrations and Estimated Soil Removal Volumes

Parcel	Existing/Final Average PCB Concentration (ppm) (See Note 1)	PCB Performance Standard (ppm)	Estimated Soil Removal Volume (cubic yards)
I8-23-6 (Commercial)			0
0-1’	2.97	25	
0-3’	2.35	25	
1-6’	2.05	200	
0-15’	1.41	100	
I8-23-6 (Recreational)			1,790
0-1’	2.74	10	
0-3’	7.26	10	
0-15’	11.44	100	

Parcel	Existing/Final Average PCB Concentration (ppm) (See Note 1)	PCB Performance Standard (ppm)	Estimated Soil Removal Volume (cubic yards)
I8-23-9			0
0-1’	1.48	25	
0-3’	1.27	25	
1-6’	1.17	200	
0-15’	0.58	100	
I8-23-10			0
0-1’	0.22	25	
0-3’	0.22	25	
1-6’	0.21	200	
0-15’	1.31	100	
I9-5-1			130
0-1’	2.49	10	
0-3’	1.69	10	
0-15’	3.81	100	
I9-5-2			0
0-1’	2.78	10	
0-3’	2.75	10	
0-15’	0.90	100	
I8-23-5			0
0-1’	4.93	25	
0-3’	2.26	25	
1-6’	0.39	200	
0-15’	0.47	100	
I8-23-4			0
0-1’	2.80	25	
0-3’	2.20	25	
1-6’	0.78	200	
0-15’	0.46	100	
Total			**1,920**

Notes:

1. The average PCB concentrations identified above represent existing conditions for all areas with the exception of the recreational portion of Parcel I8-23-6 and Parcel I9-5-1, for which the concentrations represent post-removal concentrations.

As indicated in the above table, the removal actions for Former Oxbow Areas A and C will involve the excavation of approximately 1,920 cubic yards of soil.

4.2.2 Utility-Related PCB Information

The soil-related PCB Performance Standards set forth in Paragraph 26 of the CD and Section 2.3.2 of the SOW provide that where subgrade utilities potentially subject to emergency repair requirements are present, if the spatial average PCB concentration in the utility corridor exceeds 200 ppm, GE must evaluate whether any additional response actions are necessary. The data from within the utility corridors at this RAA indicate that, with one exception, there are no discrete PCB sample results greater than 200 ppm. The one exception is the RAA11-S17 sample where the PCB concentration is 280 ppm in the 0- to 1-foot depth increment. However, PCB removal will occur at RAA11-S17 at the 0- to 1-foot depth increment as part of the remediation at Parcel I8-23-6 (recreational), as described in Section 4.3 of the Conceptual Work Plan. Therefore, after this removal at RAA11-S17, there are no individual samples within the utility corridors with PCB concentrations greater than 200 ppm.

As a result, as described in Section 4.10 of the Conceptual Work Plan, there will be no PCB results greater than 200 ppm in any of the utility bands, so spatial averaging was not needed in these bands.

4.2.3 Appendix IX+3 Evaluation Summary

As previously indicated, information regarding the post-remediation concentrations of non-PCB Appendix IX+3 constituents and corresponding area-specific risk evaluations (where necessary) is provided in Appendix C and Appendix D, respectively, of the Conceptual Work Plan. The soil removal required to address non-PCB Appendix IX+3 constituents is included in the removal volume figures set forth in Section 4.2.1 above.

4.3 Flood Storage Information

For soil removal/replacement activities, it is expected that the excavation and backfill/restoration activities will be conducted in such a manner as to re-establish the same general ground surface and topography of the affected areas (to the extent feasible). GE does not foresee any impact on the flood storage capacity from these actions.

5. Design Information

5.1 General

This section provides additional design-related information for the remediation activities at Former Oxbow Areas A and C. These activities generally consist of excavation of impacted material, disposal of this material at On-Plant Consolidation Areas (OPCAs) located at the GE Pittsfield facility, backfilling of excavations with clean material, and general site restoration. These and other pertinent components of the construction activities are discussed in the remainder of this section. As discussed in Section 6, GE will select a Remediation Contractor that is qualified to complete these activities following EPA's approval of this Final Work Plan and in accordance with the schedule to be agreed to by GE and EPA. Section 6 provides further details regarding that selection process, while Section 7 provides additional site-specific implementation details associated with construction of the various design components.

5.2 Technical Specifications

Technical design information regarding soil removal within the Former Oxbow Areas A and C is provided in this Final Work Plan. In addition, certain of the plans comprising GE's Project Operations Plan (POP) provide additional design, construction, and implementation-related information relevant to the construction activities. With the exception of the FSP/QAPP and the Health and Safety Plan (HASP) (which was provided to EPA for informational purposes only), the latest revisions to the POP were conditionally approved by EPA in a letter dated April 24, 2003, and the revised POP was submitted to EPA on July 14, 2003.

The POP contains a series of plans that address several common aspects of the Removal Actions Outside the River and apply to various activities to be conducted as part of those Remedial Actions, ranging from initial pre-design activities to the performance and completion of remediation activities. Collectively, these plans describe the minimum requirements, general activities, protocols, and methodologies applicable to these Removal Actions. These plans include a Waste Characterization Plan, Soil Cover/Backfill Characterization Plan, Site Management Plan, Ambient Air Monitoring Plan, and Contingency and Emergency Procedures Plan. The POP also includes a Construction Quality Assurance Plan (CQAP), which provides technical requirements related to items such as backfill, topsoil, seeding, mulch, etc. In addition, the CQAP specifies activities that are relevant to certain of the construction activities, such as soil placement and grading/compaction, survey control, etc. The

general provisions of the POP are applicable to the Former Oxbow Areas A and C construction activities and are incorporated herein by reference.

The various design details are summarized in this Final Work Plan, but are more specifically described in the Technical Drawings and Specifications developed by GE for use in selecting a Remediation Contractor. Copies of the Technical Drawings and Specifications are provided in Appendices A and F and include those related to soil removal as well as other construction elements.

5.3 Soil Removal Activities

As discussed in Section 4.2.1, GE will remove approximately 1,920 cubic yards of soil from Former Oxbow Areas A and C. The removal limits are shown in Technical Drawing 3 in Attachment A.

Prior to initiating removal activities for the areas subject to soil removal, the horizontal limits of removal will be surveyed and staked in the field. During removal activities, field measurements will be made to verify that the target removal depths/elevations have been achieved for each excavation area. As noted in the Conceptual Work Plan, the removal depth in the footprint of the existing loam pile at Parcel I8-23-6 reflects the depth from the surface of the loam pile. In response to condition number 2 of EPA's April 6, 2005 conditional approval letter, GE notes that the remediation depths shown in the Conceptual Work Plan and in the Technical Drawings attached hereto will be based on the existing elevations prior to EPA's construction of access roads and support areas and EPA's performance of restoration.

Based on a review of the analytical data on soils located within the limits of these removal actions, excavated soils will be transported to and consolidated at either the Building 71 or the Hill 78 OPCA, as further described in Section 7.5.2. Following removal, common backfill will be obtained from an off-site source (Section 5.5) and will be placed and compacted to re-establish original grade (i.e. elevations prior to EPA's construction activities). The provisions specified on the Technical Drawings (Attachment A) and in the Technical Specifications (Attachment B) and POP (including the Soil Cover/Backfill Characterization Plan and the CQAP) will be utilized during the removal and backfill activities.

5.4 Excavation Stabilization

As shown on the Figure 3 (technical drawings), the maximum depth of the planned excavations is 2 feet below grade. As such, it is not expected that additional means will be necessary to provide stability of the excavations prior to backfilling.

5.5 Backfilling Excavations

Soil fill and topsoil components will be used to backfill the excavations at Former Oxbow Areas A and C. Information regarding the measurement, composition, and deposition of acceptable backfill materials is provided on the Technical Drawings and in the Technical Specifications provided in Attachments A and B, respectively.

The specific fill sources to be used for this project will be identified by the selected Remediation Contractor. The backfill materials to be used will originate either from existing sources or from new, currently unidentified sources of backfill material. Existing sources of backfill material consist of those sources that have been previously used for other GE remediation projects in Pittsfield and have been previously qualified for such use in submittals to EPA and/or MDEP. The sample data presented in those documents include analyses for PCBs and Appendix IX+3 VOCs, semivolatile organic compounds (SVOCs), and metals. If such existing, approved sources have been used by GE within the past 18 months, these prior analytical data will not be resubmitted to EPA. For any backfill materials from a source that has not already been identified and characterized, representative samples of proposed fill materials will be collected and analyzed for PCBs and Appendix IX+3 VOCs, SVOCs, and metals, as required by GE's approved Soil Cover/Backfill Characterization Plan provided in the POP. The name of the proposed backfill source location and the results of the analyses for PCBs and Appendix IX+3 VOCs, SVOCs, and metals (if necessary) will be submitted to EPA in a supplemental information package prior to use of such material.

5.6 Applicable or Relevant and Appropriate Requirements

The Removal Actions to be conducted at Former Oxbow Areas A and C will be subject to several ARARs. Attachment B to the SOW identifies the chemical-, action-, and location-specific ARARs for Removal Actions Outside the River. As noted above, the Removal Action for Former Oxbow Areas A and C includes soil removal/replacement. These activities will be performed within the 100-year floodplain of the Housatonic

River. In these circumstances, this Removal Action is subject to the following ARARs identified in Attachment B to the SOW: action-specific ARARs identified in Table 2, subsection B ("Soil Removal"), subsections I and J (regarding consolidation of excavated soils at the OPCAs), and potentially subsection K ("Other"); and location-specific ARARs identified in Table 3, subsection B ("Floodplains, Wetlands, and Banks"). If excavation activities involve removal and on-site storage (at the GE Plant Area) of free product, intact drums, and/or other materials that cannot be consolidated at the OPCAs, and thus will be subsequently disposed off site, the ARARs identified in Table 2, subsection H ("Temporary On-Site Storage of Free Product, Drums, and Equipment That Will Be Disposed of Off-Site") of Attachment B to the SOW will apply to such storage. In addition, disposition of excavated materials at GE's OPCAs will be subject to the ARARs for consolidation at the OPCAs (set forth in Table 1 of the Detailed Work Plan for OPCAs).

A summary of the ARARs that were considered with respect to the remediation proposed herein, along with the associated project component(s) and means by which the ARAR is addressed by the design and implementation activities is as follows:

ARAR	Associated Project Components	Means by Which ARAR Will Be Addressed
Toxic Substances Control Act (TSCA) Regulations (PCB Remediation Waste) (40 CFR 761.61)	• Soil removal	• EPA has determined that Removal Actions conducted in accordance with the CD and SOW will not pose an unreasonable risk of injury to health or the environment.
TSCA Regulations (Decontamination) (40 CFR 761.79)	• Soil removal (equipment cleaning)	• Will be attained by cleaning equipment as necessary in accordance with TSCA regulations (see Section 7.5.5).
Resource Conservation and Recovery Act (RCRA) Hazardous Waste Regulations (40 CFR 261.24)	• Soil removal	• GE will review the relevant Appendix IX+3 data from the soils to be excavated, using a conservative screening tool (i.e., dividing the total sample results by 20) and comparing the results to allowable concentration limits associated with the Toxicity Characteristic Leaching Procedure (TCLP) under these regulations. If exceedances result from this comparison, soils will be placed in the Building 71 OPCA. Other soils will be subject to placement in either OPCA.

ARAR	Associated Project Components	Means by Which ARAR Will Be Addressed
Clean Water Act NPDES Regulations (Stormwater Discharges) (40 CFR 122.44(k); 40 CFR 122.26(c)(ii)(C); 40 CFR 125.100-.104)	• Soil removal	• Implementation of erosion and sedimentation controls (Section 7.4.5).
Massachusetts Air Pollution Control Requirements (310 CMR 7.09)	• Soil removal	• Implementation of dust control measures (as necessary) and air monitoring (Sections 7.5.1 and 7.6).
TSCA Regulations (Storage for Disposal) (40 CFR 761.61; 40 CFR 761.65)	• Temporary storage of removed materials	• Temporary storage of free product and liquids in tanks or containers at GE's existing on-plant tank system or hazardous waste storage facility, both of which meet the long-term PCB storage requirements of TSCA. • Temporary storage of drums and other equipment in containers at GE's existing on-plant hazardous waste storage facility, which meets the long-term PCB storage requirements of TSCA.
TSCA Regulations (PCB Marking Requirements) (40 CFR 761.40)	• Temporary storage of removed materials	• Will be attained by marking PCB items in accordance with these requirements.
RCRA Hazardous Waste Regulations (Storage of Hazardous Waste) (40 CFR 264, Subparts I and J 40 CFR 262.34)	• Temporary storage of removed materials	• Temporary storage of free product and liquids in tanks or containers at GE's existing on-plant tank system or hazardous waste storage facility, both of which meet the long-term PCB storage requirements of TSCA. • Temporary storage of drums and other equipment in containers at GE's existing on-plant hazardous waste storage facility. • Storage of materials in tanks will be limited to 90 days or less and will meet the substantive requirements for up to 90-day accumulation in tanks. • Materials in containers will be stored at GE's hazardous waste storage facility, which meets the requirements for long-term storage of hazardous waste in containers.

ARAR	Associated Project Components	Means by Which ARAR Will Be Addressed
RCRA Hazardous Waste Management/Disposal Facilities Regulations (Preparedness and Prevention) (40 CFR 264, Subpart C)	• Temporary storage of removed materials	• GE's existing on-plant hazardous waste storage facility meets these requirements.
RCRA Hazardous Waste Management/Disposal Facilities Regulations (General) (40 CFR 264.13 - .19)	• Temporary storage of removed materials	• Operation of GE's existing on-plant hazardous waste storage facility meets these requirements.
RCRA Hazardous Waste Management/Disposal Facilities Regulations (Closure) (40 CFR 264.111 - .115)	• Temporary storage of removed materials	• Upon termination of operations, GE's existing on-plant hazardous waste storage facility will be closed in accordance with the substantive requirements of these regulations.
Massachusetts Hazardous Waste Regulations (Storage of Hazardous Waste) (310 CMR 30.680, 30.690, 30.340)	• Temporary storage of removed materials	• See discussion of Federal RCRA Hazardous Waste Regulations (Storage of Hazardous Waste) above.
Massachusetts Hazardous Waste Regulations (Closure) (310 CMR 30.580)	• Temporary storage of removed materials	• See discussion of Federal RCRA Hazardous Waste Regulations (Closure) above.
ARARs Relating to Disposition of Excavated Materials in OPCAs	• Permanent consolidation of removed materials at OPCAs	• Refer to August 25, 1999 letter from GE to EPA re: *Supplemental Addendum to June 1999 Detailed Work Plan*, for relevant ARARs relating to disposition of excavated material at the OPCAs and means of addressing such ARARs.
TSCA Spill Cleanup Policy (40 CFR 761, Subpart G)	• New PCB spills (if any) during on-site activities	• GE will consider and address cleanup policy for any new PCB spills that occur during the work.

ARAR	Associated Project Components	Means by Which ARAR Will Be Addressed
Executive Order for Floodplain Management [Exec. Order 11988 (1977); 40 CFR Part 6, App. A; 40 CFR 6.302(b)]	• Soil removal activities in floodplain	• No practical alternative with less adverse impact on floodplain. • Implementation of erosion and sedimentation controls (Section 7.4.5). • Excavation and backfill/restoration will be conducted in a manner to avoid a loss in flood storage capacity (Section 6.6). • Restoration of habitat (Section 8.5.7).
Massachusetts Wetlands Protection Act and Regulations [MGL c. 131 §40; 310 CMR 10.53(3)(q); 310 CMR 10.54 - .58]	• Soil removal • Placement of fill materials within 100-year floodplain	• No practical alternative with less adverse impact on resource areas. • All practical measures will be taken to minimize adverse impact on river. • Implementation of erosion and sedimentation controls (Section 8.4.5). • Excavation and backfill/restoration will be conducted in a manner to avoid a loss in flood storage capacity (Section 5.6). • Restoration of disturbed vegetation (Section 7.5.6).

5.7 Drainage Swale Measures

As required by EPA in its April 6, 2005 conditional approval letter, GE will take measures to minimize the potential for material within the drainage swale at the end of Day Street to discharge to the river. First, GE proposes to remove refuse and debris that is currently located in this section of the drainage swale. Next, rip-rap will be placed at areas along the banks of the swale where there is potential for erosion based on visual inspection. In addition, GE will place rip-rap within the swale in the area at the end of Day Street to prevent the scouring of sediments there due to flow from the culvert of the storm sewer.

6. Contractor Selection

Following EPA's approval of this Final Work Plan and in accordance with the schedule to be agreed to by GE and EPA, GE will select a Remediation Contractor that is qualified to complete the on-site soil remediation/construction activities. To accomplish this, GE will develop a Request for Proposal (RFP) that describes the project, provides the Technical Drawings contained herein, provides Technical Specifications for completing the work, and solicits bids from prospective contractors. GE and its Supervising Contractor (Blasland, Bouck & Lee, Inc.) will then review the potential Contractor bids for completeness, relevant experience, the proposed work schedule, and the Contractors' financial status. After the review is complete, GE will select the Remediation Contractor and initiate a contractual agreement.

Upon selection, the Remediation Contractor will be responsible for providing several submittals to GE, including those identified in Section 7.3 of this Final Work Plan. GE will subsequently provide the Contractor information and submittals to EPA in a supplemental information package, as described in Section 9 of this Final Work Plan.

7. Implementation Plan

7.1 General

As indicated in Section 5.2, the POP contains a series of plans that address several common aspects for Removal Actions Outside the River. As relevant, those plans will be followed during implementation of the Removal Action associated with Former Oxbow Areas A and C.

As a supplement to the implementation-related procedures specified in the POP plans, this section provides additional details regarding certain construction activities. Specifically, this section identifies the requirements for project-specific plans to be submitted by the selected Remediation Contractor, describes site-specific elements of the site preparation and construction activities, and summarizes the project-specific perimeter air monitoring approach.

7.2 Project Participants

To the extent possible, the following table identifies the key project participants involved in the design and implementation of the remediation/construction activities summarized herein, along with their project roles and contact information:

Organization/Contact	Role	Address and Phone Number
United States Environmental Protection Agency William P. Lovely, Jr.	- Lead regulatory agency. - Review and approval of Final Work Plan. - Oversight of Removal Actions.	USEPA Region 1 One Congress Street, Suite 1100 Boston, MA 02114-2023 (617) 918-1240
General Electric Company Richard W. Gates	- Supervise pre-design, construction, and documentation activities related to the Former Oxbow Areas A and C Removal Action. - Supervise implementation of the Removal Action and related activities to ensure they are conducted in accordance with the CD. - Direct/coordinate activities of the Remediation Contractor and other GE-contracted organizations. - Responsible for preparation of a Final Completion Report.	General Electric Company 159 Plastics Avenue Building 59 Pittsfield, MA 01201 (413) 448-5909

Organization/Contact	Role	Address and Phone Number
Blasland, Bouck & Lee, Inc. James M. Nuss, P.E., LSP	- Supervising Remediation Contractor for GE. - Review Remediation Contractor submittals. - Project coordination and documentation. - Provide technical assistance related to implementation of the Removal Action. - Assist in verifying that the Removal Action is complete and performed in accordance with the Final Work Plan. - Prepare Final Completion Report.	Blasland, Bouck & Lee, Inc. 6723 Towpath Road Syracuse, NY 13214 (315) 446-9120
Berkshire Environmental Consultants, Inc. Maura Hawkins	- Design and implement perimeter air monitoring in conjunction with construction activities.	Berkshire Environmental Consultants, Inc. 152 North Street, Suite 250 Pittsfield, MA 01201 (413) 443-0130
Remediation Contractor (To be determined)	- Implement all construction-related activities.	(To be determined)

7.3 Contractor Submittals

Once selected, the Remediation Contractor will be required to provide certain pre-mobilization submittals to demonstrate that the Contractor: (a) has an adequate understanding of the scope of the Removal Action; (b) has developed a project-specific sequence that can efficiently perform all on-site activities within the allowable schedule; (c) will utilize acceptable materials, products, and procedures; and (d) will perform all activities in a manner that is protective of on-site workers and the surrounding community. Certain of those submittals relate to the manner in which the work activities will be implemented and, as such, will supplement the information and procedures presented in this Final Work Plan. Those submittals include an Operations Plan, Health and Safety (HASP), and Contingency Plan. Each of these submittals is further described below.

Operations Plan

The purpose of the Operations Plan is to summarize the materials, procedures, timelines, and controls that the Contractor intends to utilize during project activities. This plan will be prepared in consultation with GE and its Supervising Contractor and will include the following:

- List of equipment to be used on site;
- Residential property protection procedures;
- Work Schedule;
- The Contractor's proposed plan for controlling vehicular and pedestrian traffic during the performance of construction activities;
- Proposed excavation stabilization measures (if any);
- The Contractor's qualifications package (if requested by GE);
- Stormwater (including run-on and run-off), erosion, noise, and dust control measures;
- The Contractor's proposed excavation approach;
- Materials handling and staging approach; and
- Equipment cleaning procedures.

HASP

The HASP will identify the Remediation Contractor's project-specific health and safety procedures and will be developed to address the minimum requirements established in the POP and 29 CFR 1910 and 1926. The plan will address those activities to be undertaken by the Contractor and present required information including, but not limited to, the following (as applicable):

- Training;
- Identification of key personnel (including the Contractor's Health and Safety Officer);
- Medical surveillance;
- Site hazards;
- Work zones;
- Personal safety equipment and protective clothing;
- Personal air monitoring;
- Personnel/equipment cleaning;
- Confined space entry;
- Construction safety procedures;
- Standard operating procedures and safety programs; and
- Material safety data sheets.

Contingency Plan

The Contingency Plan will set forth procedures for responding to emergency conditions or events that may occur during the performance of the Removal Action, and will include the following information:

- A spill prevention control and countermeasures plan for all materials brought on the work site;
- Emergency vehicular access/egress;
- Evacuation procedures of personnel from the work site;
- For work sites that include or are adjacent to a surface water drainage way, a flood control contingency plan identifying measures to protect the work site(s) and the waterway from impact in the event of high water and/or flood conditions;
- A list of all contact personnel, with phone numbers and procedures for notifying each;
- Routes to local hospitals; and
- Identification of responsible personnel who will be in a position at all times to receive incoming phone calls and to dispatch Contractor personnel and equipment in the event of an emergency situation.

In addition to the required pre-mobilization document submittals specified above, the Remediation Contractor will be required to prepare a submittal(s) specifying the sources and, if necessary, the corresponding analytical data for proposed backfill sources to be used during the performance of this project.

Once developed by the selected Remediation Contractor and approved by GE, each of the above-listed Contractor submittals will be submitted to EPA in a supplemental information package. In addition to these submittals, the Contractor is required to provide GE with various other submittals over the course of this project. The overall purpose of such submittals is to verify that the materials and procedures used in the construction activities are consistent with the design of the Removal Action. In accordance with the POP, all Contractor submittals will be tracked to confirm their receipt and approval. A copy of the Technical Submittal Register provided to the prospective Contractors as part of the RFP for this project is provided in Attachment C. (Please note that submittals required by GE but not subject to submittal to EPA as part of the supplemental information package have been shaded.)

7.4 Site Preparation

General site preparation activities for Former Oxbow Areas A and C are shown on Technical Drawing 2 (Attachment A). Immediately prior to or following mobilization to the work area, the selected Remediation Contractor will perform several site preparation activities to establish the necessary site controls, features, and procedures for subsequent implementation of the construction activities. These activities include the following:

- Obtaining utility clearances;
- Establishing site controls and access;
- Site survey and layout;
- Installing erosion and sedimentation control measures; and
- Surface preparation.

General information regarding various site preparation activities (e.g., coordinating with local utilities, permitting, verifying existing conditions, establishing work areas, etc.) is provided in the general CQAP (part of the POP); the information provided below supplements that CQAP by providing additional site-specific details associated with certain of these activities.

7.4.1 Utility Clearances

Aboveground and underground utilities that could potentially be affected by the construction activities will be identified prior to initiating any intrusive subsurface activities (e.g., soil excavation, etc.). As indicated on Technical Drawings 1 and 2 (Attachment A), certain above-ground and subsurface utilities are known to be present within and adjacent to Former Oxbow Areas A and C. Subsurface utilities include gas, electric, and sanitary and storm sewer lines that are present in the areas where remediation activities are to be performed. Aboveground utilities include any overhead power lines that may be present such areas. The selected Contractor will be responsible for coordinating with DIGSAFE and the City of Pittsfield to determine the locations of all utilities at the start of the work and coordinating with the owners of the utilities regarding relocation/termination of any utilities, as required.

7.4.2 Work Area Security

The level of work area security will depend on the activities being performed and the location of those activities. Security measures will be selected in consultation with the Remediation Contractor and may consist of temporary fencing or barriers, maintenance of sign-in/sign-out sheets, and implementation of safe work practices, as described below. In addition, GE will coordinate with EPA throughout the performance of response actions regarding security implementation.

Temporary Fencing - Temporary construction fencing will be installed, as needed, to delineate and secure areas during ongoing construction activities. While other fencing configurations of equivalent performance may be considered, such temporary fencing is expected to be at least 4 feet in height, constructed of high-density polyethylene, and orange in color.

Sign-In/Sign-Out Sheet - For the duration of construction activities, a sign-in/sign-out sheet will be maintained for the work site. All on-site personnel and visitors will be required to sign in upon entering the work area and sign out upon leaving.

Safe work practices will also be employed at this work site. These activities may include any of the following:

Daily Safety Meetings - Such meetings, commonly referred to as tailgate meetings, are typically held with the Contractor to discuss hazards potentially encountered during the planned daily activities.

Posting of Warning Tape - To restrict access during construction activities, warning tape may be installed at locations to delineate certain areas, such as the exclusion zone, contaminant reduction zone, and/or support zone.

Use of Flagmen or Other Signaling Devices - Certain excavation activities in high traffic areas may necessitate the use of flagmen or other signaling devices (i.e., flashing beacons mounted on sawhorses).

7.4.3 "Clean" Access Area

Since a number of activities will require periodic access/egress between the work site and adjacent areas, a "clean" transition area will be established. Such an area will be used for equipment/material delivery and for the positioning of trucks for subsequent loading and off-site transport of excavated materials. It is expected that each transport area will be constructed of gravel or a layer of geotextile fabric and will be properly delineated from the remainder of the property. The specific location and construction of the access area will be developed by the Remediation Contractor in accordance with the anticipated progression of the construction actions, as well as other factors such as the layout of the site, traffic patterns, and material handling procedures.

7.4.4 Survey Control

In accordance with the CQAP, survey controls will be established at the start of the work and maintained throughout the construction activities. GE will provide survey benchmarks so that the Remediation Contractor can establish appropriate horizontal and vertical control consistent with the existing survey data. As stated in the CQAP, the Remediation Contractor will establish a minimum 50-foot control grid within the areas subject to removal. This survey will be performed to verify that the horizontal and vertical limits of removals have been obtained and the final surface grade has been achieved to the existing elevations prior to EPA constructing any access roads, support areas, and performing any restoration.

7.4.5 Erosion and Sedimentation Control Measures

Erosion and sedimentation control measures will be implemented to minimize the potential for erosion of exposed soils and subsequent accumulation of materials in site drainage pathways. In addition, these measures will be used to divert rainfall runoff from entering work areas and open excavations.

For Former Oxbow Areas A and C, erosion control measures to be implemented will include placement of staked silt fencing along the sides of the work areas. In addition, hale bales will be placed along the sides of the work areas located adjacent to the banks of the Housatonic River and the channel located at the northeast part of Parcel I8-23-6 plus additional area-specific measures, as required. The approximate location and layout of the hay bales and silt fencing are indicated on Technical Drawing 2 (Attachment A). GE will coordinate with EPA during the installation of erosion controls along the boundaries of areas to be addressed by GE and those to be

addressed by EPA. Fencing will be placed at the start of the site work activities and will be maintained until a good stand of vegetation is established. In addition to the hay bale and/or silt fence, other erosion and sedimentation control measures will be implemented as needed.

7.4.6 Surface Preparation

Various surface preparation activities will be performed prior to or in conjunction with the initial site preparation activities. These surface preparation activities are specified on Technical Drawing 2 (Attachment A).

7.5 Construction Activities

7.5.1 Monitoring Well Decommissioning

As shown on Technical Drawing 1 (Attachment A), eight wells, GMA5-1 through -8, located within Former Oxbow Areas A and C were installed and have been sampled as part of the groundwater-related activities at GMA 5. At the present time, these activities consist of the performance of an interim groundwater monitoring program at GMA 5. GE proposes to protect these wells during the performance of the remediation activities described herein. However, three wells installed at Former Oxbow Areas A and C prior to the GMA 5 program, A-1, C-1, and C-2, are not sampled or considered to be necessary for that program or subsequent activities. Therefore, as depicted on Technical Drawing 2 in Attachment A, GE proposes to decommission wells, A-1, C-1, and C-2 prior to the commencement of soil removal activities.

7.5.2 Soil Removal and Materials Handling

The proposed Removal Actions will require excavation and handling of certain existing soils Former Oxbow Areas A and C. Specifically, existing soils within the excavation limits and depths, as depicted on Technical Drawing 3 (Attachment A), will be removed using conventional construction equipment (e.g., excavator, backhoe, and loader). The maximum depth of excavation will be approximately 2 feet below ground surface (bgs). The Contractor shall ensure that no free liquids are present within excavated materials prior to being transported/disposed at the appropriate OPCA.

As soils are excavated and prior to their transport to the appropriate OPCA, a number of intermediate on-site handling activities may be necessary. To ensure that such activities are performed in a manner that minimizes the potential for inadvertent releases to the environment, unsafe conditions for on-site and off-site personnel, and delays or complications in project completion, several on-site material handling procedures will be implemented. The specific method(s) of handling the removed soils will be based on, but not limited to, the following considerations:

- The characteristics of the excavated soils and corresponding disposition requirements;
- The locations from which the materials are removed and their proximity to the loading area(s); and
- The overall sequence and schedule of the Removal Actions.

To reduce the potential for the release of PCBs or other Appendix IX+3 constituents to the environment during removal and handling activities, the number of times that the excavated material is handled will be kept to a minimum. To accomplish this, the Remediation Contractor will conduct direct loading to trucks to the extent practical. Additional information regarding material handling is discussed below.

- To reduce the potential for migration of PCBs or other Appendix IX+3 constituents due to wind- and rainfall-related factors, work areas where excavation activities are yet to be completed will be protected with a cover (e.g., polyethylene sheeting) which will be anchored when the area is not under active excavation/use. In addition, if concerns regarding airborne dust are identified or suspected, water will be sprayed to keep the open excavation (or excavated soils) moist.

- To the extent feasible and practicable, material handling and loading areas will not be established in locations that may interfere with construction operations or necessary traffic flow. In addition, material handling areas will be located so as to take into account site topography and avoid (to the extent possible) low-lying drainage areas where surface runoff is likely to accumulate.

- Additional erosion and sedimentation control measures (e.g., hay bales and/or silt fencing) will be utilized as described above in Section 7.4.5.

Based on the specified soil removal limits identified on Technical Drawing 3 (Attachment A), the total volume of existing materials to be removed from Former Oxbow Areas A and C is approximately 1,920 in-situ cubic yards. Based on a review of the analytical results collected from within these removal limits during previous

investigations, GE has determined that certain of the soils to be removed as part of the activities described herein will be subject to placement in the Building 71 OPCA while other soils will be placed at the Hill 78 OPCA. The corresponding OPCA which will be used for the placement of soils from each of the removal areas is identified on Technical Drawing 3. The volume of non-TSCA material that will be disposed of at the Hill 78 OPCA is approximately 270 cy. The volume of TSCA material to be disposed at the Building 71 OPCA is approximately 1,650 cy. Additional information regarding the transport and disposition of excavated materials is provided below in Section 7.5.2.

7.5.3 Transport and Disposition of Excavated Materials and Remediation-Derived Waste

As indicated above, all excavated materials will be consolidated in GE's OPCAs, excluding items (if any) that are prohibited for disposition at the OPCAs under the CD and SOW. Previous sampling and analysis conducted for soils at Former Oxbow Areas A and C indicate that soils at certain of the sampling locations that represent the areas where soil will be excavated either have PCB concentrations over 50 ppm and thus are regulated for disposal under TSCA. These excavated soils will be transported to and consolidated at the Building 71 OPCA, which is authorized to receive TSCA- and RCRA-regulated material. Soils not regulated under TSCA and RCRA will be transported to and consolidated at the Hill 78 OPCA. Technical Drawing 3 (Attachment A) provides the limits of soils to be transported to and consolidated at the Building 71 and Hill 78 OPCAs.

For the transportation of excavated materials from Former Oxbow Areas A and C to the OPCAs, GE proposes to utilize the primary route shown on Figure 7-1 (or, if that route cannot be used, the secondary route shown on Figure 7-1 or an alternate route proposed by GE for EPA approval). The transportation of excavated materials from Former Oxbow Areas A and C to the Building 71 OPCA will occur "on-site" within the meaning of Paragraph 9.a of the CD, and thus will be subject to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) on-site permitting exemption referenced in Paragraph 9.a of the CD. In these circumstances, site-specific transportation procedures have been developed for this Removal Action, as listed below.

The Remediation Contractor will be required to implement the following procedures for the transport of excavated materials from Former Oxbow Areas A and C to the appropriate OPCA:

- Employ qualified personnel trained per U.S. Department of Transportation (DOT) requirements for handling and shipping hazardous materials, with such training to include general safety, emergency response, exposure protection, accident prevention, preparation of shipping papers, and securing loads;

- Employ drivers that have a Commercial Driver's License (CDL) with a Hazardous Materials Endorsement;

- Utilize trucks that are DOT-inspected;

- Include in its HASP, Operations Plan, and Contingency Plan detailed provisions for responding to transportation emergencies such as spills, releases, or other incidents;

- Maintain records of the number of loads of materials sent to the OPCAs on a daily basis; and

- Confirm that the materials are suitable for transport (i.e., no free liquids).

The transport of excavated materials from Former Oxbow Areas A and C to the appropriate OPCA will be conducted in accordance with the following guidelines:

- After a safety check of the truck, the truck bed will be lined with polyethylene. Excavated soil will be placed in the truck and the load will be covered.

- An appropriate Materials Bill of Lading (BOL) will be prepared and signed by the truck driver. The DOT shipping description to be used on the BOL will be:

  "RQ, Polychlorinated biphenyls, mixture, 9, UN 2315, PG 111, RQ"

- After another safety check of the vehicle and placarding, the truck will leave the site and proceed to the appropriate OPCA utilizing the primary route shown on Figure 7-1. If, for some reason, the primary route is not used, the secondary route shown on Figure 7-1 (or an alternate route to be proposed by GE to EPA) will be used.

- Upon arrival of the truck at the appropriate OPCA, the OPCA Contractor will document receipt of the load and the material will be off-loaded and placed by the OPCA Contractor.

7.5.4 Backfilling of Excavations

Backfilling operations will be initiated as soon as practicable after completion and proper documentation of excavation activities (i.e., survey control). It is anticipated that the excavations will be backfilled and compacted using conventional construction equipment. Clean backfill materials will be placed in 8-inch –thick lifts in a loose state and compacted in accordance with the Technical Specifications (Attachment B) prior to additional fill being placed within the excavation. The excavation will be brought up to the predetermined subgrade elevation prior to installing the final surface layer (e.g., topsoil, seed, and mulch).

Backfill material will be clean, natural material, no greater than gravel in size to ensure proper settlement, permeability, and compactability. The specific fill sources to be used for this project will be identified by the Remediation Contractor. A description of the process for identifying such sources and, if necessary, submitting the analytical data for them was presented in Section 5.5.

7.5.5 Installation of Excavation Controls

As discussed in Section 5.4, the maximum depth of the planned excavations is 2 feet below grade. Therefore, the stability of the excavations is not expected to present a problem.

7.5.6 Equipment Cleaning

Equipment and materials that have come into contact with existing soils at Former Oxbow Areas A and C during the construction activities will be cleaned prior to relocation to an area outside the work zone (i.e., the excavation and loading areas), prior to handling backfill materials, and prior to its departure from Former Oxbow Areas A and C. Equipment cleaning will be conducted as specified in Section 3.5 of the Site Management Plan in the POP.

7.5.7 Restoration of Disturbed Vegetation

Prior to the initiation of remediation actions at Former Oxbow Areas A and C, the Remediation Contractor will be required to perform an inventory of all existing trees and shrubs (i.e., type, quantity, size, etc.) located within the limits of the removal actions. As indicated on Technical Drawing 4 (Attachment A), vegetated surfaces will

require the placement of 3 inches of topsoil followed by the placement of a seed mix and mulch to restore pre-excavation grades. A plan to address any other replanting will be developed based on consultation with EPA and discussions with the property owners. GE will coordinate with EPA regarding the schedule and implementation of restoration activities.

7.6 Perimeter Air Monitoring

Ambient air monitoring for PCBs and particulate matter will be performed during the remediation actions. The scope of the ambient air monitoring program is presented in Attachment D to this Final Work Plan. In overview, ambient air monitoring for PCBs will include collection of ambient air samples using "high volume" samplers equipped with glass fiber filters and polyurethane foam (PUF) cartridges. The samples will be collected, analyzed, and evaluated using the procedures specified in EPA Compendium Method TO-4A. To obtain representative data on ambient levels of PCBs around the construction site before and during construction activities, two PCB air sampling events will be performed prior to the start of construction activities and additional events will be performed once every 4 weeks during remediation. At least one 24-hour PCB sampling event will be performed during remediation activity. Ambient air monitoring for particulates will be performed on a continuous basis during all active construction activities using real-time particulate air monitors.

For both PCB and particulate monitoring, 5 monitor locations will be established within Former Oxbow Areas A and C, as indicated on Figure D-1. Although subject to change based on the location of construction activities and weather conditions, the ambient air monitoring scope of work (Attachment D) identifies preliminary locations for air monitoring. Finally, background monitoring locations will be established during remediation activities at, for particulate monitoring, and at an appropriate background location, to be determined, for PCBs.

8. Post-Construction Activities

8.1 General

This section addresses the post-construction activities to be performed by GE at Former Oxbow Areas A and C. These activities include project closeout activities (including preparation of and submittal of a Final Completion Report), Post-Removal Site Control activities, and additional activities relating to properties at which a Conditional Solution is implemented. Each of these topics is further discussed below.

8.2 Project Closeout – Pre-Certification Inspection and Completion Report

Once GE has determined that the Removal Action for Former Oxbow Areas A and C is complete (excluding Post-Removal Site Control activities) and the applicable Performance Standards have been attained, GE will schedule and conduct a pre-certification inspection with EPA and MDEP. This inspection will be conducted within 90 days after GE concludes that the Removal Action is complete.

After the pre-certification inspection, GE will proceed with remaining closeout activities, which will consist of development and submittal of a Final Completion Report to summarize and document the scope of the completed Removal Action activities. At a minimum, the Final Completion Report will include the following:

- A description of the Removal Action performed;
- Identification of any deviations from the design submittals approved by EPA;
- A listing of Removal Action quantities, including soil volumes removed;
- Results of quality assurance/quality control (QA/QC) testing performed during the Removal Action;
- Survey data to document the current grade and final surface contours;
- Copies of Record Drawings developed by the Contractor to document the as-built conditions;

- Representative project photographs; and

- Documentation regarding the disposition of materials excavated in conjunction with the construction activities.

8.3 Post-Removal Site Control Activities

Post-construction inspection and maintenance (I/M) activities will be performed at Former Oxbow Areas A and C, as required by Technical Attachment J to the SOW. A Post-Removal Site Control Plan (PRSCP) which describes and identifies the frequencies and duration of these I/M activities is included as Attachment E.

8.4 Additional Activities Relating to Properties with Conditional Solutions

In addition to the Post-Removal Site Control activities mentioned above and further described in Attachment E, GE will undertake activities to comply with the requirements of Paragraphs 34 through 38 of the CD with respect to each property at which a Conditional Solution is implemented. These activities will include the following:

(1) After completion of all on-site removal activities at this RAA, GE will provide a notification to the owner of each property at which a Conditional Solution has been implemented, describing the terms of the Conditional Solution under the CD (including the requirements applicable to GE and the owner regarding future remediation activities at the property) and describing the residual contamination at the property. In addition, GE will provide such a notification to the holders of any easements or other encumbrances on the property.

(2) In accordance with Paragraph 36 of the CD, on an annual basis, GE will review the most recent property records to determine whether there has been a change in ownership of the property; and, if there has been a change in ownership, GE will provide notice to the new owner regarding the same items described in # 1 above.

(3) In accordance with Paragraph 38 and Section III of Appendix Q to the CD, GE will perform an annual inspection of the property to determine whether there is evidence, based on visual observation, that any of the following have occurred since implementation of the Removal Action or since the last inspection: (a) any change in activities and uses of the property that would be potentially inconsistent with the land use for which the Conditional Solution was implemented; (b) installation of a new utility or replacement of an existing utility that involved disturbance of soil; (c) any excavations or other activities that might involve exposure to soil deeper than 3 feet from the original grade; and (d) any reduction in surface grade due to activities listed in (b) and (c) above. Following such inspection, GE will prepare and submit a report on the inspection to EPA and MDEP. More details regarding the annual inspections and reports, including an annual inspection checklist to be used for the inspections and reporting, will be provided in the Final Completion Report on this Removal Action.

9. Schedule

As described in Section 6, GE anticipates selecting a Remediation Contractor following EPA's approval of this Final RD/RA Work Plan. GE proposes that, within 30 days of selection of a Remediation Contractor, GE will submit a supplemental information package to EPA. The supplemental information package is anticipated to include the following:

- Identification of and contact information for the selected Remediation Contractor;
- Copies of the Remediation Contractor's pre-mobilization submittals (i.e., Operations Plan, HASP, and Contingency Plan);
- Identification of backfill sources and locations; and
- Analytical data for samples collected from the backfill sources (unless the backfill sources have already been approved based on previously submitted analytical data).

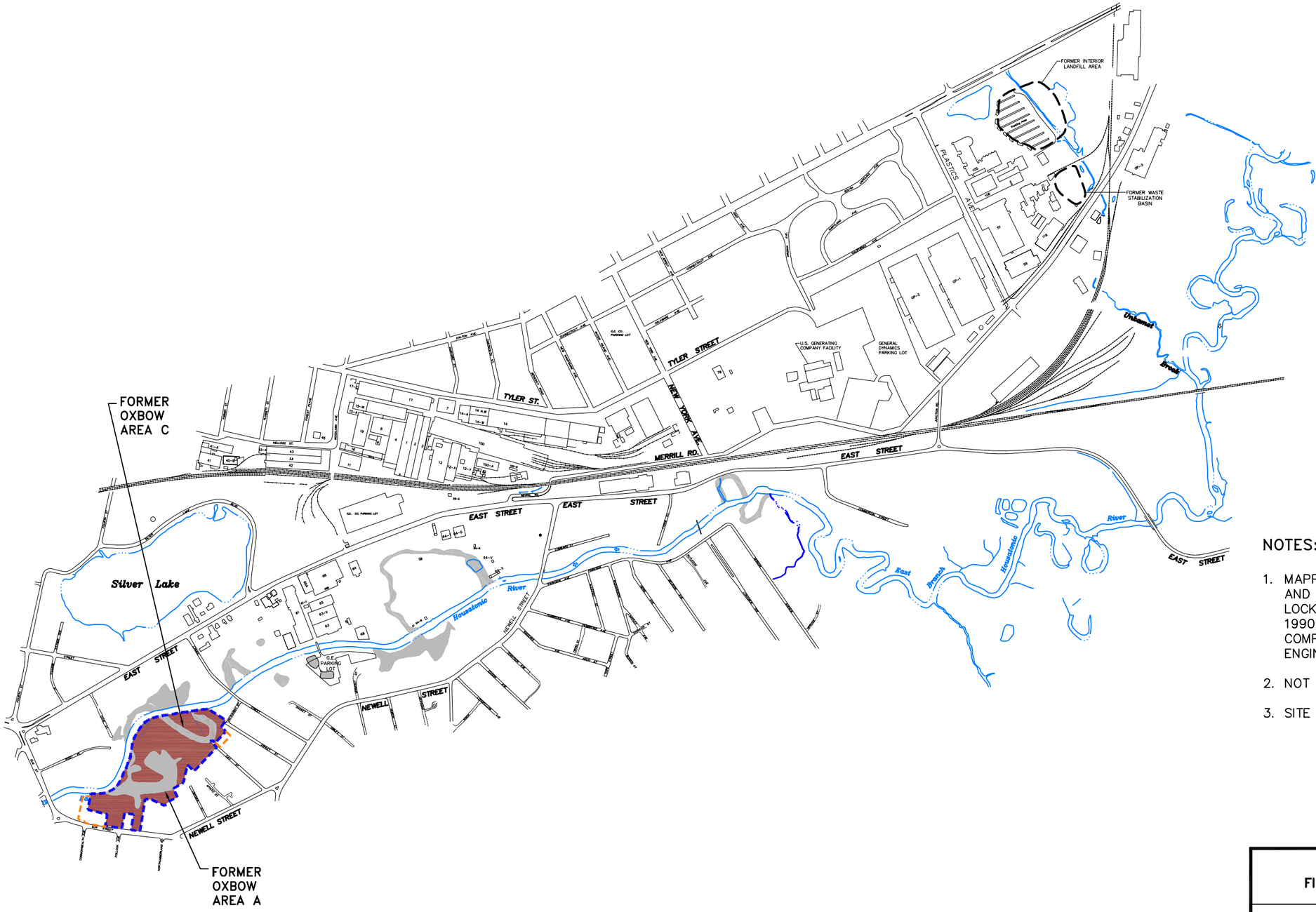
Following EPA approval of the supplemental information package, on a schedule to be discussed with EPA, site preparation activities will be initiated. The specific schedule for the implementation and completion of the Removal Actions at this RAA will depend on several factors, including the timing of EPA approval of this Final Work Plan and the supplemental information package and receipt of the necessary access permission from non-GE property owners to conduct the proposed remediation actions at their properties. Details regarding overall project duration, including an estimate of the duration of the entire project in working weeks, will be provided in the Remediation Contractor's Work Schedule – which is a required component of the Contingency Plan submittal (Section 7.3) – to be provided to EPA as part of the forthcoming supplemental information package. With respect to access, if GE is unable to obtain access permission from particular property owners after using "best efforts" (as defined in the CD) to do so, it will so advise EPA and MDEP and seek their assistance in obtaining such access pursuant to Paragraph 60.f(i) of the CD. In addition, if issues relating to access may cause a delay in the completion of the remediation, GE will so advise EPA.

Within 90 days of completing the field construction activities, GE will schedule and conduct a pre-certification inspection with EPA and MDEP, as described in Section 8.2. Within 30 days thereafter, or at such other time as proposed by GE and approved by EPA at the time of the inspection, GE will submit a Final Completion Report on this Removal Action. That report will represent the completion of the CD-required construction activities.

Periodic inspection reports will be provided thereafter to EPA in accordance with the schedules outlined in the PRSCP in Attachment E.

Figures

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists



LEGEND:

- APPROXIMATE REMOVAL ACTION AREA BOUNDARY
- MODIFIED REMOVAL ACTION AREA BOUNDARY (PROPERTIES 18-23-4 AND 18-23-5 ADDED TO THE RAA FOR THE PURPOSE OF ADDRESSING PCBS ONLY)
- FORMER OXBOW AREAS A AND C REMOVAL ACTION AREAS
- FORMER OXBOW/LOW-LYING AREA

NOTES:

1. MAPPING IS BASED ON AERIAL PHOTOGRAPHS AND PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. – FLOWN IN APRIL 1990; DATA PROVIDED BY GENERAL ELECTRIC COMPANY; AND BLASLAND AND BOUCK ENGINEERS, P.C. CONSTRUCTION PLANS.
2. NOT ALL PHYSICAL FEATURES SHOWN.
3. SITE BOUNDARIES ARE APPROXIMATE.

0 1000' 2000'

APPROXIMATE SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

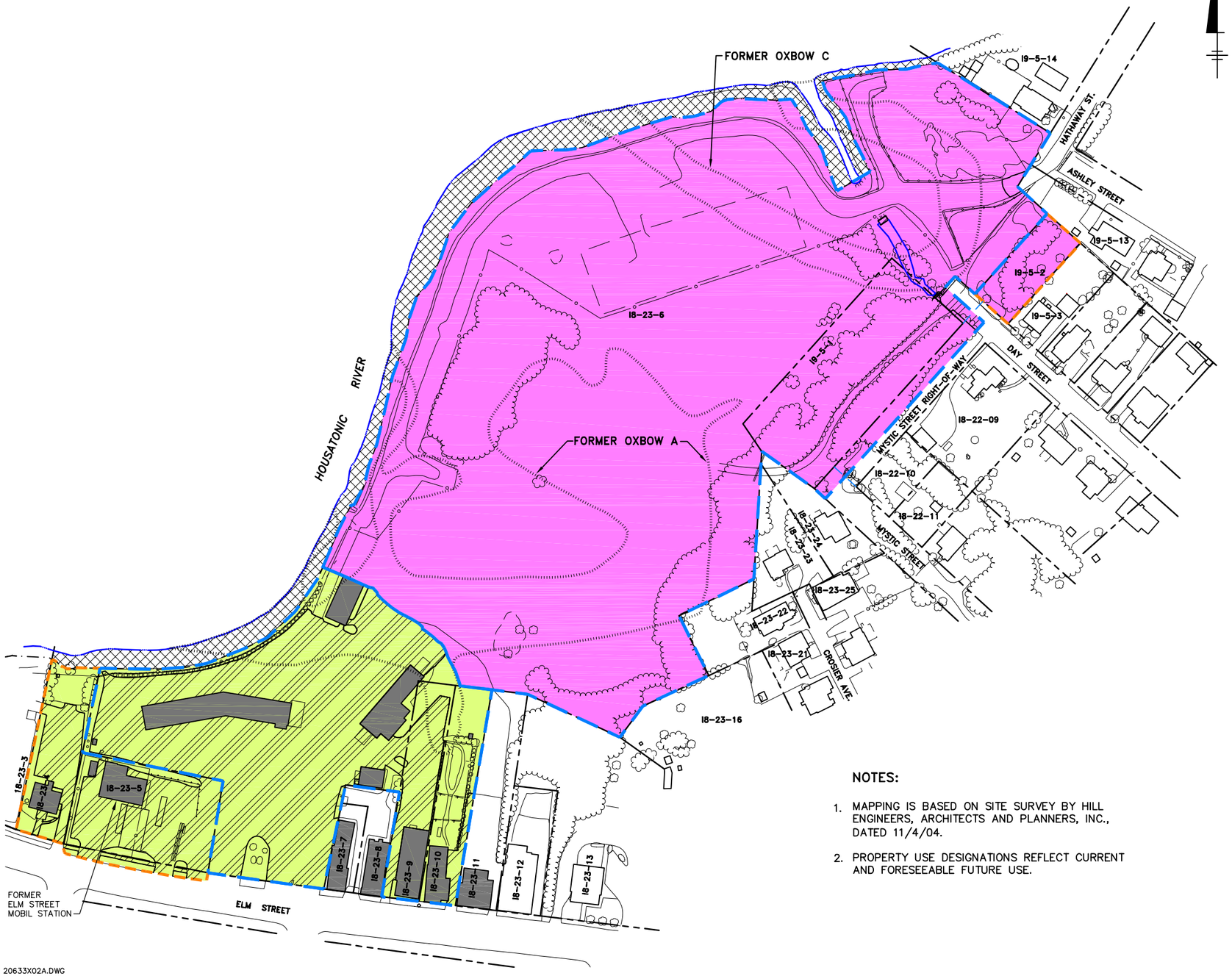
FINAL RD/RA WORK PLAN FOR FORMER OXBOW AREAS A AND C

REMOVAL ACTION AREA

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE
1-1

X: 20633X03.DWG
L: ON=*, OFF=REF
P: PAGESET/PLT-BL
7/05/05 SYR-85-DMW TJR GJD
N/20633003/20633G01.DWG



LEGEND:

- APPROXIMATE ORIGINAL REMOVAL ACTION AREA BOUNDARY
- AVERAGING AREA BOUNDARY
- MODIFIED REMOVAL ACTION AREA BOUNDARY (PROPERTIES 18–23–4 AND 18–23–5 ADDED TO THE RAA FOR THE PURPOSE OF ADDRESSING PCBS ONLY)
- FORMER FILTRATION FACILITY
- PROPERTY BOUNDARY
- 18–23–6 PROPERTY ID
- EDGE OF WATER
- VEGETATION
- FORMER OXBOW/LOW LYING AREA
- WOODEN FENCE
- WIRE FENCE
- CHAIN LINK FENCE
- GUARDRAIL
- PAVED AREA
- RECREATIONAL PROPERTY (NON–GE OWNED)
- COMMERCIAL/INDUSTRIAL PROPERTY (NON–GE OWNED)
- AREA INCLUDED AS PART OF 1 1/2–MILE REACH REMOVAL ACTION

0 150' 300'
GRAPHIC SCALE

NOTES:

1. MAPPING IS BASED ON SITE SURVEY BY HILL ENGINEERS, ARCHITECTS AND PLANNERS, INC., DATED 11/4/04.
2. PROPERTY USE DESIGNATIONS REFLECT CURRENT AND FORESEEABLE FUTURE USE.

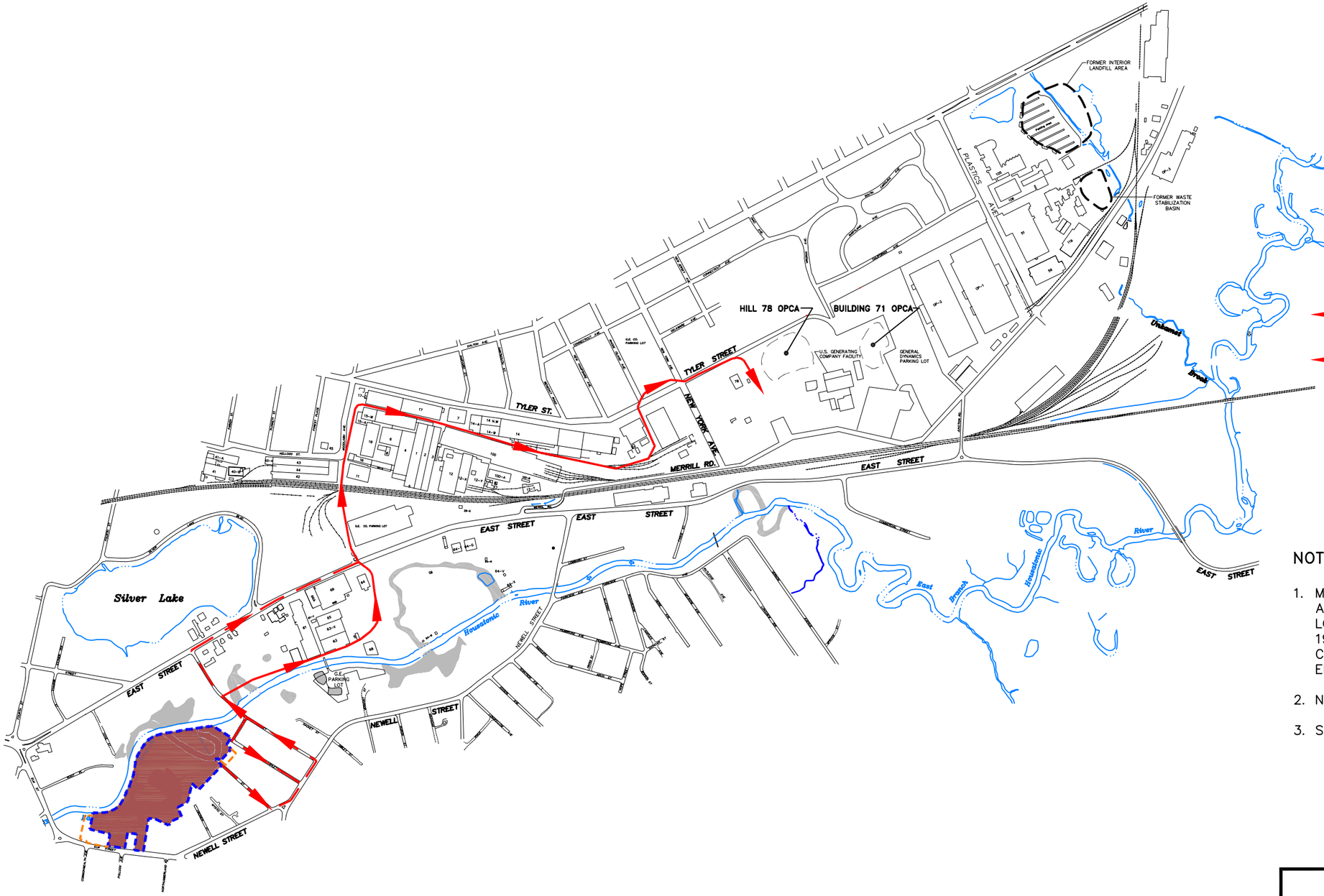
X: 20633X02A.DWG
L: ON*, OFF=REF*
P: PAGESET/PLT-BL
7/1/05 SYR-85-DMW GJD
N/20633003/20633G09.DWG

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
FINAL RD/RA WORK PLAN FOR FORMER OXBOW AREAS A AND C

SITE PLAN

BBL BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

FIGURE **1-2**



LEGEND:

PRIMARY TRAVEL ROUTE TO ON-PLANT CONSOLIDATION AREAS

SECONDARY TRAVEL ROUTE TO ON-PLANT CONSOLIDATION AREAS

NOTES:

1. MAPPING IS BASED ON AERIAL PHOTOGRAPHS AND PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. – FLOWN IN APRIL 1990; DATA PROVIDED BY GENERAL ELECTRIC COMPANY; AND BLASLAND AND BOUCK ENGINEERS, P.C. CONSTRUCTION PLANS.
2. NOT ALL PHYSICAL FEATURES SHOWN.
3. SITE BOUNDARIES ARE APPROXIMATE.

0 1000' 2000'

APPROXIMATE SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

FINAL RD/RA WORK PLAN FOR FORMER OXBOW AREAS A AND C

PROPOSED PRIMARY AND SECONDARY TRAVEL ROUTES FOR EXCAVATED MATERIALS TO THE OPCAS

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE 7-1

X: 20633X03.DWG
L: ON=*, OFF=REF
P: PAGESET/PLT-BL
7/1/05 SYR-85-DMW TJR GJD
N/20633003/20633G02.DWG

Attachments

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

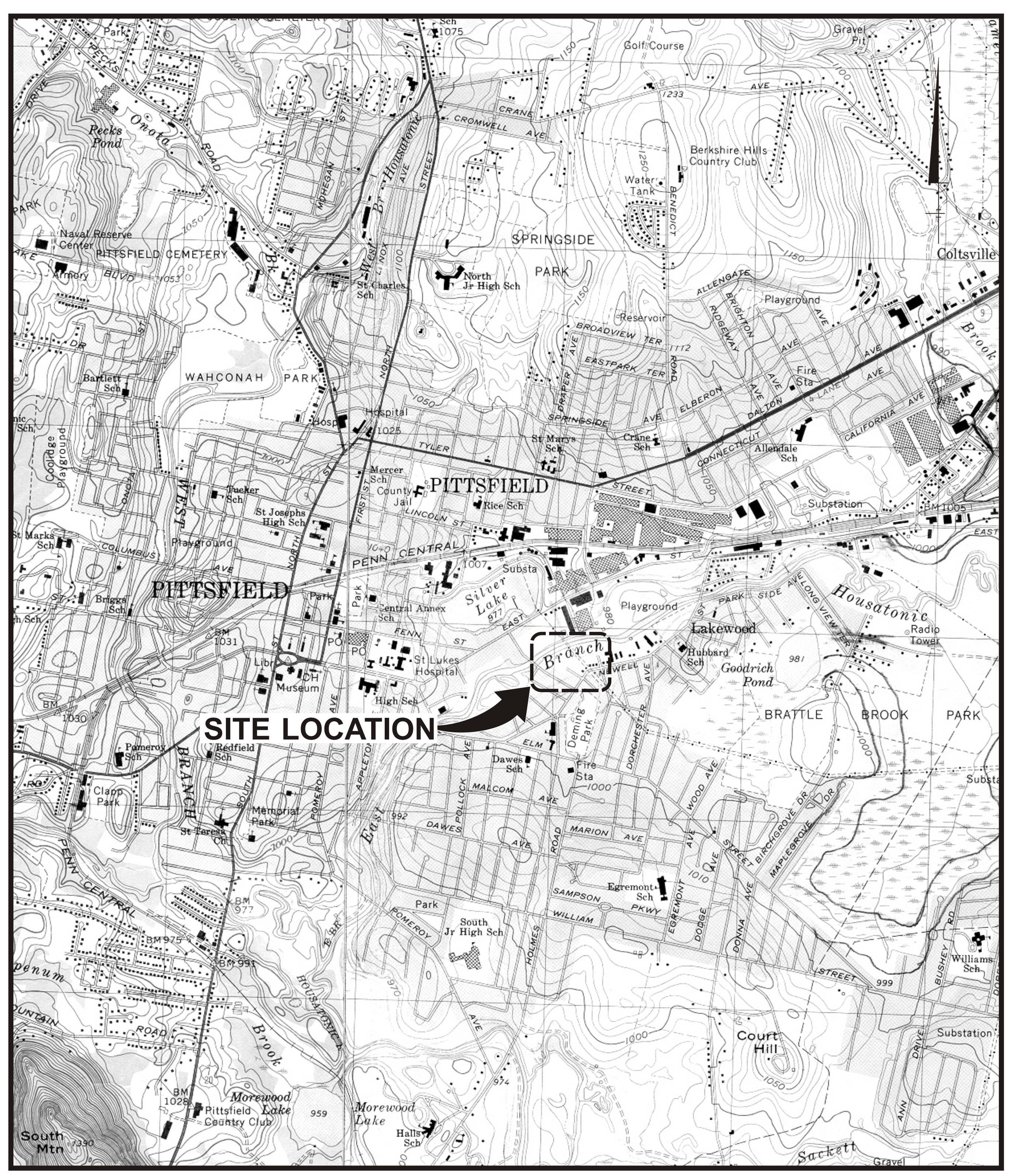
Attachment A

Technical Drawings

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

TECHNICAL DRAWINGS

REMOVAL ACTION
OXBOW AREAS A AND C
REMOVAL ACTION AREA (RAA)



REFERENCE: Base Map Source: USGS 7.5 Min. Topo. Quads., Pittsfield West, Mass-New York and Pittsfield East, Mass., 1973.

2000' 0 2000'
APPROX. SCALE: 1 = 2000 FEET

LOCATION MAP

JULY 2005

PREPARED FOR:

General Electric Company
Pittsfield, Massachusetts

PREPARED BY:

BBL®
BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

INDEX TO DRAWINGS

07/05/05 SYR-D85-DJH
20633004/cdr/20633C01.cdr

LEGEND:

- APPROXIMATE ORIGINAL REMOVAL ACTION AREA BOUNDARY
- AVERAGING AREA BOUNDARY
- MODIFIED REMOVAL ACTION AREA BOUNDARY (PROPERTIES 18-23-4 AND 18-23-5 ADDED TO THE RAA FOR THE PURPOSE OF ADDRESSING PCBS ONLY)
- FORMER FILTRATION FACILITY
- PROPERTY BOUNDARY
- 18-23-6 PROPERTY ID
- EDGE OF WATER
- VEGETATION
- APPROXIMATE FORMER OXBOW/LOW LYING AREA
- AREA INCLUDED AS PART OF 1 1/2-MILE REACH REMOVAL ACTION
- GMA5-7 MONITORING WELL
- LIGHT POLE
- UTILITY POLE
- CATCH BASIN
- DRAIN MANHOLE
- SANITARY MANHOLE
- TELEPHONE MANHOLE
- WATER SHUTOFF
- 905 INDEX ELEVATION CONTOUR
- INTERMEDIATE ELEVATION CONTOUR
- WOODEN FENCE
- WIRE FENCE
- CHAIN LINK FENCE
- GUARDRAIL
- GAS SERVICE
- WATER SERVICE
- SANITARY SEWER
- ELECTRIC SERVICE
- STORM DRAIN LINE
- TELEPHONE SERVICE
- OVERHEAD WIRES

NOTES:

1. THE BASE MAP FEATURES PRESENTED ON THIS FIGURE FROM SURVEY BY HILL ENGINEERS, ARCHITECTS AND PLANNERS, FILE NUMBER GE1091-001-CX101-M, DATED 11/24/04. SURVEY DATA BASED UPON AN AERIAL PHOTOGRAMMETRIC SURVEY DONE IN APRIL 2001 AND SUPPLEMENTED WITH FIELD SURVEY DONE BETWEEN OCTOBER AND NOVEMBER 2004.
2. UTILITIES ARE SHOWN IN AN APPROXIMATED WAY ONLY AND ALL UTILITIES MAY NOT BE SHOWN.
3. THE PARCELS SHOWN HEREON MAY BE SUBJECT TO RIGHTS AND EASEMENTS AS CONTAINED IN THE VARIOUS DEEDS OF RECORD DESCRIBING SAID PREMISES. ALL RIGHTS AND EASEMENT MAY NOT BE DEPICTED HEREON.
4. CONTRACTOR TO COORDINATE WITH "DIGSAFE" FOR LOCATIONS/IDENTIFYING UTILITIES. NO SITE WORK WILL BE PERFORMED BY THE CONTRACTOR UNTIL UTILITY INVESTIGATION BY "DIGSAFE" HAS BEEN COMPLETED.
5. EXISTING CONTOUR INTERVAL IS 1 FOOT.

X: 20633X00, X02.DWG
L: ON=*, OFF=REF
P: PAGESET/PLT-CDL2B
7/1/05 SYR-85-DMW GJD
N/20633003/CONTRACT/20633G01.DWG

Graphic Scale
75' 0 75' 150'
1"=75'

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED.
USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

No.	Date	Revisions	Init

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

Professional Engineer's Name
Professional Engineer's No.
State | Date Signed
Project Mgr. DAJ | Designed by | Drawn by DMW

BBL BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS
RD/RA WORK PLAN FOR FORMER OXBOW AREAS A AND C

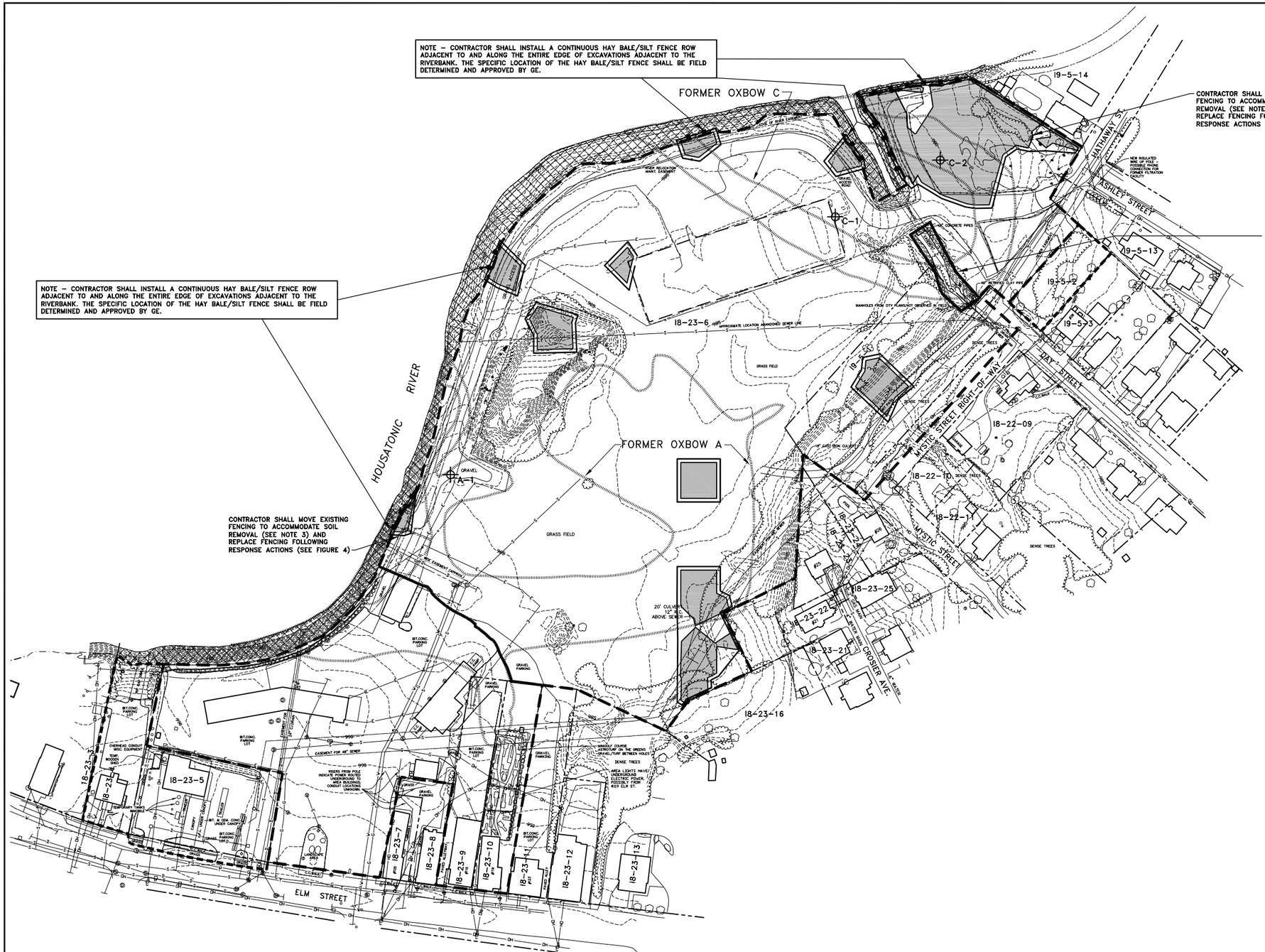
EXISTING SITE PLAN

TECHNICAL DRAWINGS

BBL Project No. 206.33
Date JUNE 2005

Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Syracuse, NY 13214
315-446-9120

1



NOTES:

1. REFER TO DRAWING 1 FOR ADDITIONAL BASEMAP INFORMATION AND CONTRACTOR REQUIREMENTS.
2. EXISTING FEATURES WITHIN LIMITS OF SOIL REMOVAL THAT ARE REMOVED SHALL BE DISPOSED OF AT THE APPROPRIATE GE-OWNED OPCA BY CONTRACTOR. CERTAIN EXISTING FEATURES SHALL BE RECONSTRUCTED BY CONTRACTOR IN ACCORDANCE WITH DRAWINGS 3 AND 4.
3. UNLESS OTHERWISE NOTED, CONTRACTOR SHALL REMOVE FOR DISPOSAL AND REPLACE WITH NEW, ALL FENCE POSTS WITHIN LIMITS OF SOIL REMOVAL. THE FENCE MAY BE REUSED IF APPROVED BY GE OR GE'S REPRESENTATIVE. ALL PORTIONS OF THE FENCE DEEMED UNUSABLE BY GE OR GE'S REPRESENTATIVE SHALL BE DISPOSED AND NEW SECTIONS OF FENCE SHALL BE INSTALLED BY CONTRACTOR.
4. AS NEEDED, CONTRACTOR SHALL PERFORM CLEARING AND GRUBBING ACTIVITIES IN AREAS SUBJECT TO RESPONSE ACTIONS (i.e., EXCAVATION AREAS).
5. MATERIALS AND DEBRIS REMOVED DURING THE IMPLEMENTATION OF RESPONSE ACTIONS WILL BE DISPOSED IN ACCORDANCE WITH THE SURROUNDING SOILS (AS APPROPRIATE). FOR EXAMPLE, MATERIALS AND DEBRIS REMOVED FROM AREAS CONTAINING TSCA SOILS WILL BE DISPOSED AT THE BUILDING 71 OPCA (SEE NOTE 9 ON TECHNICAL DRAWING 9).
6. MONITORING WELLS A-1, C-1, AND C-2 WILL BE DECOMMISSIONED AS PART OF SITE PREPARATION ACTIVITIES.

X: 20633X00, X02.DWG
L: ON=*, OFF=REF
P: PAGESET/PLT-CDL2B
7/1/05 SYR-85-DMW GJD
N/20633003/CONTRACT/20633G02.DWG

Graphic Scale
75' 0 75' 150'
1"=75'

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED. **USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.**

No.	Date	Revisions	Init

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

Professional Engineer's Name
Professional Engineer's No.
State | Date Signed
Project Mgr. DAJ | Designed by | Drawn by DMW

BBL BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS
RD/RA WORK PLAN FOR FORMER OXBOW AREAS A AND C

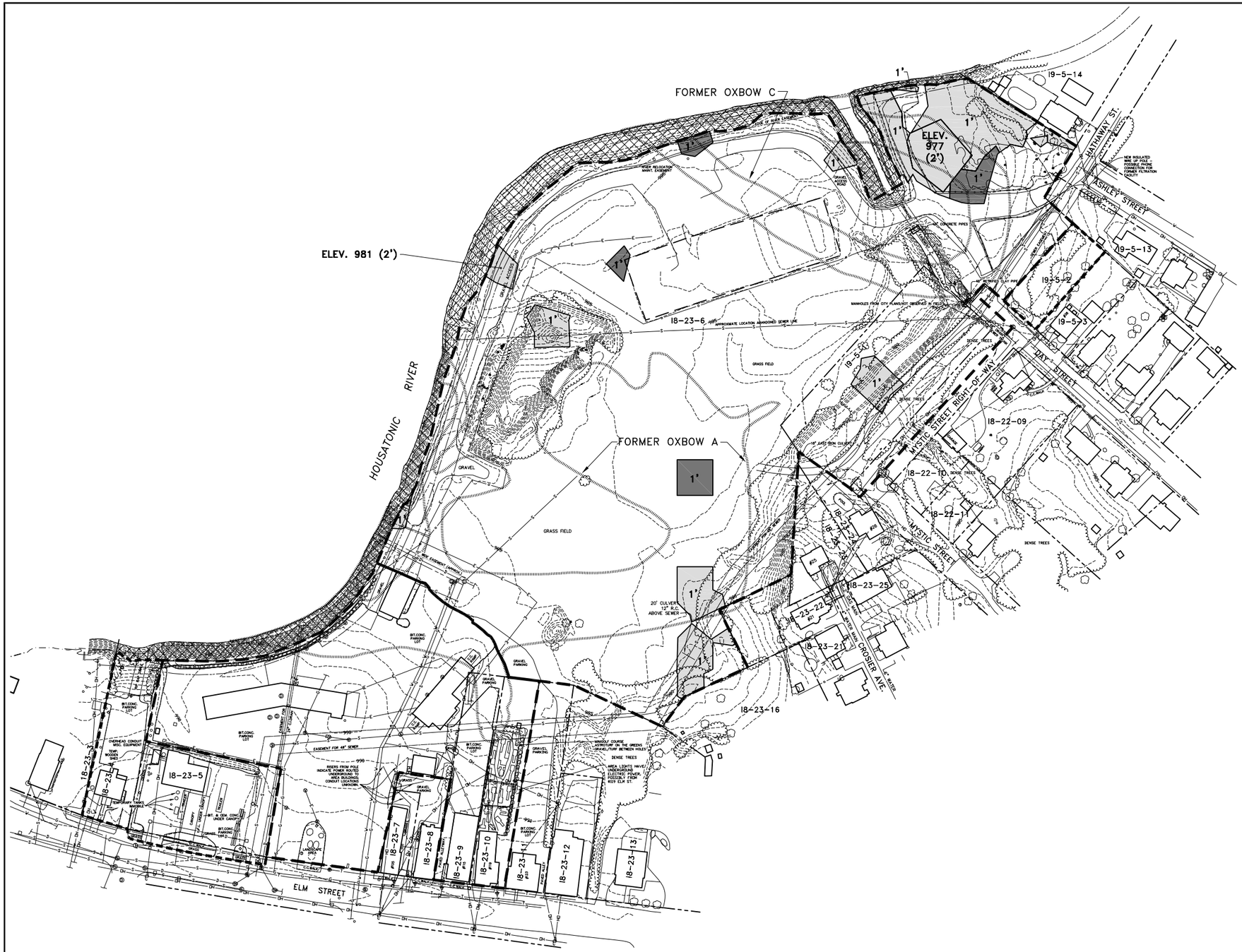
SITE PREPARATION PLAN

TECHNICAL DRAWINGS

BBL Project No. 206.33
Date JUNE 2005

Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Syracuse, NY 13214
315-446-9120

2



LEGEND:

- APPROXIMATE ORIGINAL REMOVAL ACTION AREA BOUNDARY
- AVERAGING AREA BOUNDARY
- MODIFIED REMOVAL ACTION AREA BOUNDARY (PROPERTIES 18-23-4 AND 18-23-5 ADDED TO THE RAA FOR THE PURPOSE OF ADDRESSING PCBS ONLY)
- FORMER FILTRATION FACILITY
- PROPERTY BOUNDARY
- 18-23-6 PROPERTY ID
- EDGE OF WATER
- VEGETATION
- APPROXIMATE FORMER OXBOW/LOW LYING AREA
- AREA INCLUDED AS PART OF 1 1/2-MILE REACH REMOVAL ACTION
- LIGHT POLE
- UTILITY POLE
- CATCH BASIN
- DRAIN MANHOLE
- SANITARY MANHOLE
- TELEPHONE MANHOLE
- WATER SHUTOFF
- 985 INDEX ELEVATION CONTOUR
- INTERMEDIATE ELEVATION CONTOUR
- WOODEN FENCE
- WIRE FENCE
- CHAIN LINK FENCE
- GUARDRAIL
- G GAS SERVICE
- W WATER SERVICE
- S SANITARY SEWER
- E ELECTRIC SERVICE
- D STORM DRAIN LINE
- T TELEPHONE SERVICE
- OH OVERHEAD WIRES
- TSCA REMOVAL (SEE NOTE 3)
- NON-TSCA REMOVAL (SEE NOTE 3)

NOTES:

1. REFER TO DRAWING 1 FOR ADDITIONAL BASEMAP INFORMATION AND CONTRACTOR REQUIREMENTS.
2. AREAS DESIGNATED AS 1' WILL BE SUBJECT TO SOIL REMOVAL ACTIVITIES TO A DEPTH OF 1 FOOT BELOW GROUND SURFACE. ALL OTHER EXCAVATIONS SHALL EXTEND TO THE SPECIFIED ELEVATION. (DEPTHS SHOWN IN PARENTHESES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY).
3. EXCAVATED MATERIALS SPECIFIED HEREIN AS TSCA TO BE DISPOSED OF AT THE BUILDING 71 OPCA. ALL OTHER EXCAVATION MATERIALS SPECIFIED HEREIN TO BE DISPOSED OF AT THE HILL 78 OPCA.
4. TREES AND RIPRAP WITHIN THE LIMITS OF EPA's HOUSATONIC RIVER EXCAVATION SHALL BE PROTECTED OR RESTORED TO EXISTING CONDITION.
5. CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES IN THE VICINITY OF UTILITY POLES THROUGHOUT THE IMPLEMENTATION OF REMOVAL ACTIONS.
6. THE CONTRACTOR SHALL SHEAR/SHRED ALL TREES AND SHRUBS (INCLUDING ROOTS) REMOVED DURING THE PERFORMANCE OF RESPONSE ACTIONS FOR TRANSPORTATION TO THE BUILDING 71 OPCA OR HILL 78 OPCA AS APPROPRIATE AND APPROVED BY GE.

X: 20633X00, X02.DWG
L: ON=*, OFF=REF
P: PAGESET/PLT-CDL2B
7/1/05 SYR-85-DMW GJD
N/20633003/CONTRACT/20633G04.DWG

Graphic Scale
75' 0 75' 150'
1"=75'

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED. **USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.**

No.	Date	Revisions	Init

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

Professional Engineer's Name

Professional Engineer's No.

State | Date Signed

Project Mgr. DAJ | Designed by | Drawn by DMW

BBL BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS

RD/RA WORK PLAN FOR FORMER OXBOW AREAS A AND C

EXCAVATION LIMITS

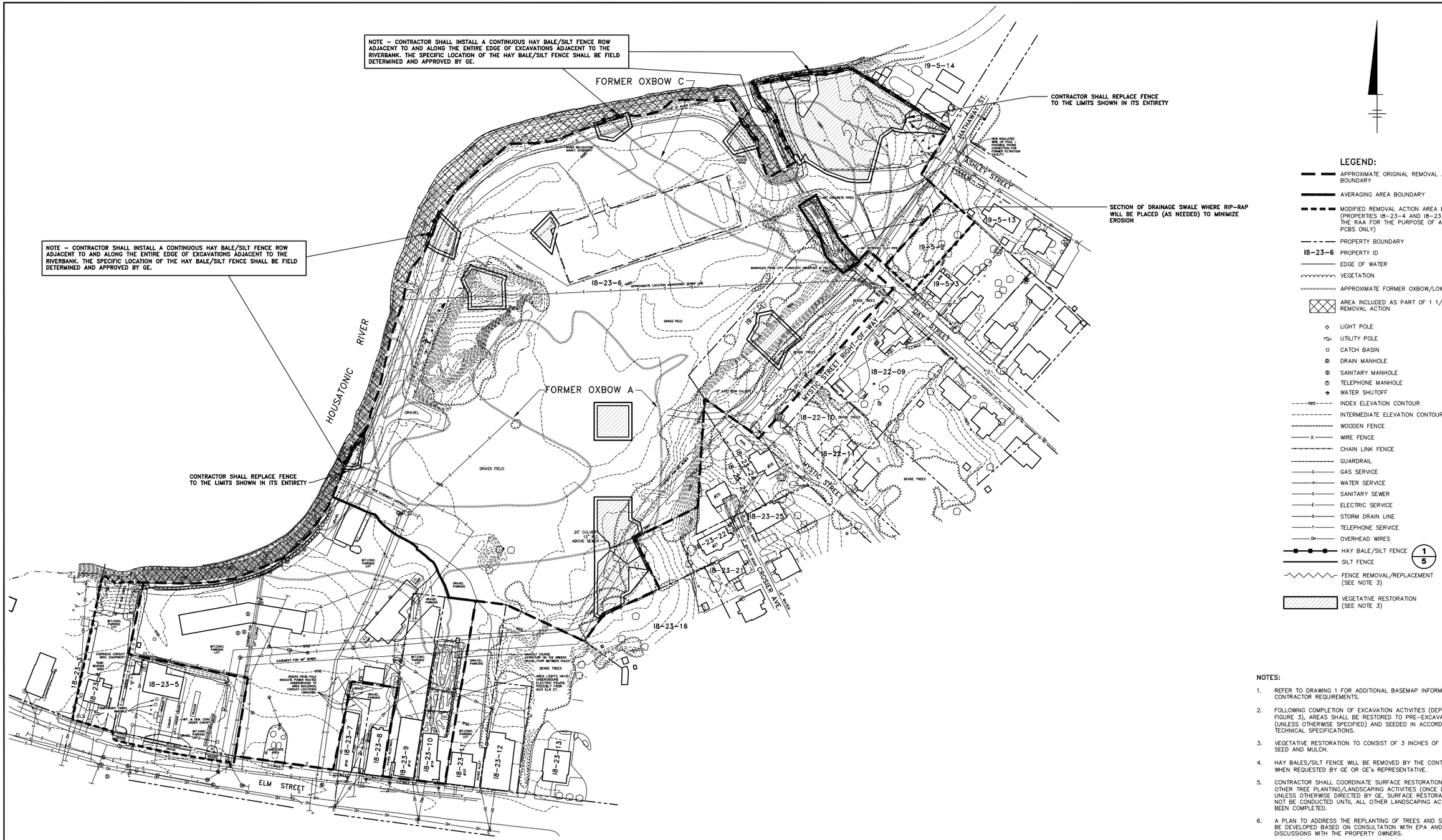
TECHNICAL DRAWINGS

BBL Project No. 206.33

Date JUNE 2005

Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Syracuse, NY 13214
315-446-9120

3



NOTES:

1. REFER TO DRAWING 1 FOR ADDITIONAL BASEMAP INFORMATION AND CONTRACTOR REQUIREMENTS.
2. FOLLOWING COMPLETION OF EXCAVATION ACTIVITIES (DEPICTED ON FIGURE 3), AREAS SHALL BE RESTORED TO PRE-EXCAVATION GRADES (UNLESS OTHERWISE SPECIFIED) AND SEEDED IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS.
3. VEGETATIVE RESTORATION TO CONSIST OF 3 INCHES OF TOPSOIL, SEED AND MULCH.
4. HAY BALES/SILT FENCE WILL BE REMOVED BY THE CONTRACTOR WHEN REQUESTED BY GE OR GE's REPRESENTATIVE.
5. CONTRACTOR SHALL COORDINATE SURFACE RESTORATIONS WITH OTHER TREE PLANTING/LANDSCAPING ACTIVITIES (ONCE DETERMINED). UNLESS OTHERWISE DIRECTED BY GE, SURFACE RESTORATION SHALL NOT BE CONDUCTED UNTIL ALL OTHER LANDSCAPING ACTIVITIES HAVE BEEN COMPLETED.
6. A PLAN TO ADDRESS THE REPLANTING OF TREES AND SHRUBS WILL BE DEVELOPED BASED ON CONSULTATION WITH EPA AND DISCUSSIONS WITH THE PROPERTY OWNERS.

X: 20633X00, X02.DWG
L: ON=*, OFF=REF
P: PAGESET/PLT-CDL2B
7/1/05 SYR-85-DMW GJD
N/20633003/CONTRACT/20633G03.DWG

Graphic Scale
75' 0 75' 150'
1"=75'

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED. **USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.**

No.	Date	Revisions	Init

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

Professional Engineer's Name
Professional Engineer's No.
State | Date Signed
Project Mgr. DAJ | Designed by | Drawn by DMW

BBL BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

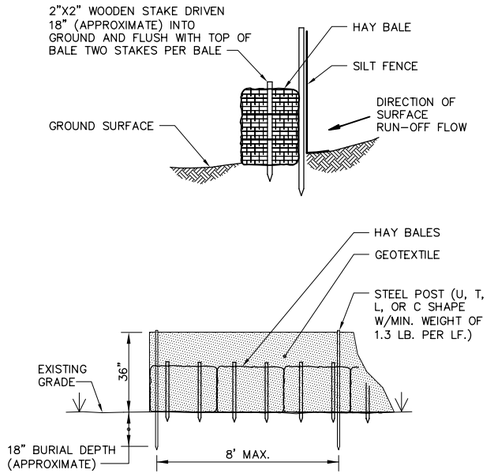
GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS
RD/RA WORK PLAN FOR FORMER OXBOW AREAS A AND C

SITE RESTORATION PLAN

TECHNICAL DRAWINGS

BBL Project No. 206.33
Date JUNE 2005
Blasland, Bouck & Lee, Inc. Corporate Headquarters 6723 Towpath Road Syracuse, NY 13214 315-446-9120

4



NOTES:

1. UNTIL SUCH TIME THAT ALL EXCAVATION ACTIVITIES HAVE BEEN COMPLETED AND BACKFILL MATERIAL HAS BEEN PLACED IN ALL AREAS, SILT ACCUMULATIONS ADJACENT TO EROSION CONTROL MEASURES SHALL BE IMMEDIATELY REMOVED AND DISPOSED WITH SOILS SUBJECT TO TRANSPORT AND DISPOSAL.
2. THE CONTRACTOR SHALL INSPECT INSTALLATION AND REMOVE SILT AND OTHER DEBRIS AS IT ACCUMULATES.
3. HAY BALES AND SILT FENCE WILL BE REMOVED BY THE CONTRACTOR WHEN REQUESTED BY GE OR GE'S REPRESENTATIVE. CONTRACTOR SHALL BACKFILL EXCAVATIONS AS NECESSARY AND RESTORE SURFACE COVER.
4. THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF THE HAY BALES AND SILT FENCING UNTIL RESTORATION ACTIVITIES ARE COMPLETE.

HAY BALE AND SILT FENCE (1)

NOT TO SCALE

GENERAL NOTES - DRAWINGS 1 THROUGH 4

1. THE SOILS SUBJECT TO EXCAVATION AND HANDLING CONTAIN PCBs AND OTHER HAZARDOUS CONSTITUENTS AND SHOULD BE HANDLED IN ACCORDANCE WITH APPLICABLE REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING AND IMPLEMENTING APPROPRIATE HEALTH AND SAFETY MEASURES FOR ITS EMPLOYEES AND SUBCONTRACTORS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING SURVEY CONTROL AND VERIFYING EXISTING GRADES AND POST-EXCAVATION ELEVATIONS. GE WILL IDENTIFY LOCATION(S) AND ELEVATION(S) OF SUITABLE BENCHMARKS TO BE USED FOR SURVEY CONTROL.
3. THE DRAWINGS MAY NOT INDICATE ALL SURFACE FEATURES SUBJECT TO REPLACEMENT AS PART OF SITE RESTORATION ACTIVITIES. THIS WILL NOT RELIEVE THE CONTRACTOR FROM REMOVING AND REPLACING (IF NECESSARY) ANY AND ALL SUCH ITEMS AT NO ADDITIONAL COST TO GE.
4. LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL (SHOWN OR NOT SHOWN) ABOVE AND BELOW GROUND UTILITIES AND STRUCTURES THAT MAY EXIST WITHIN THE PROJECT LIMITS PRIOR TO COMMENCEMENT OF WORK.
5. THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE UTILITY COMPANIES FOR THE TEMPORARY PROTECTION OF (AND/OR REMOVAL AND REPLACEMENT, AS NECESSARY, AS DETERMINED BY THE APPROPRIATE UTILITY COMPANY) ANY UTILITY POLES, GUY WIRES, UNDERGROUND UTILITIES, AND/OR OVERHEAD WIRES THAT FALL WITHIN THE LIMITS OF EXCAVATION.
6. EXCAVATION LIMITS SHOWN ON THE TECHNICAL DRAWINGS REPRESENT SOILS THAT REQUIRE REMOVAL TO ACHIEVE THE NECESSARY REMOVAL ACTION OUTCOME. ADDITIONAL REMOVAL THAT MAY BE NEEDED TO FACILITATE CONSTRUCTION ACCESS, RESTORATION, ETC. HAS NOT BEEN IDENTIFIED.
7. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO AVOID DAMAGE TO STRUCTURES THAT ARE NOT SUBJECT TO REMOVAL AND REPLACEMENT AS PART OF THIS CONTRACT. THE CONTRACTOR SHALL REPAIR ANY STRUCTURAL OR EXTERNAL DAMAGES TO SUCH STRUCTURES AT NO ADDITIONAL COST TO GE.
8. THE CONTRACTOR SHALL COORDINATE SITE ACTIVITIES TO MINIMIZE INFRINGEMENT UPON NORMAL TRAFFIC FLOW ON ADJACENT ROADWAYS.
9. ABOVEGROUND PORTIONS OF ITEMS SUBJECT TO REMOVAL AND REPLACEMENT TO ACCOMMODATE EXCAVATION ACTIVITIES (E.G., FENCING, ETC.) MAY BE SALVAGED FOR REUSE UPON APPROVAL BY GE OR GE'S REPRESENTATIVE. APPROVED SALVAGED MATERIALS MAY BE USED WHEN RECONSTRUCTING THESE ITEMS. BELOW-GRADE COMPONENTS AND/OR COMPONENTS THAT HAVE CONTACTED SOILS SUBJECT TO EXCAVATION SHALL BE HANDLED AND DISPOSED OF WITH THE ASSOCIATED SOILS. ALL SUCH ITEMS SHALL BE BROKEN INTO SUFFICIENTLY SMALL PIECES (IF NECESSARY) TO BE ACCEPTABLE FOR TRANSPORT AND DISPOSAL WITH THE SOILS. BELOW-GRADE COMPONENTS SHALL BE REPLACED AS PART OF SITE RESTORATION ACTIVITIES.
10. THE CONTRACTOR SHALL SHEAR/SHRED ALL TREES AND SHRUBS (INCLUDING ROOTS) REMOVED DURING THE PERFORMANCE OF RESPONSE ACTIONS FOR TRANSPORTATION TO THE BUILDING 71 OPCA OR HILL 78 OPCA AS APPROPRIATE AND APPROVED BY GE.
11. THE CONTRACTOR SHALL PROVIDE A WATER TRUCK AND APPROPRIATE EQUIPMENT FOR DUST SUPPRESSION WITHIN SOIL EXCAVATION, HAUL ROADS, AND LOADING AREAS. THESE AREAS SHALL BE WATERED BASED ON VISUAL OBSERVATIONS, THE RESULTS OF AIR MONITORING ACTIVITIES, AND/OR DIRECTION BY GE OR GE'S REPRESENTATIVE.
12. ON A DAILY BASIS, THE CONTRACTOR SHALL ENSURE PERIMETER AIR MONITORING (TO BE PERFORMED BY OTHERS) IS BEING PERFORMED PRIOR TO THE START OF EXCAVATION OR OTHER EXISTING SOIL HANDLING ACTIVITIES.
13. THE HORIZONTAL LIMITS OF EXCAVATION ACTIVITIES WILL BE PHYSICALLY DELINEATED IN THE FIELD BY THE CONTRACTOR. WITHIN THESE LIMITS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXECUTING AND VERIFYING THE SPECIFIED DEPTH OR ELEVATION OF EXCAVATION.
14. THE CONTRACTOR MAY CONSTRUCT TEMPORARY SOIL STOCKPILES FOR EXCAVATED MATERIALS AT AREAS AND OF VOLUMES APPROVED BY GE OR GE'S REPRESENTATIVE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING PERIMETER EROSION AND SEDIMENTATION CONTROLS (IN THE FORM OF SILT FENCING AND HAY BALES AS INDICATED), RUN-OFF WATER COLLECTION, AND DUST SUPPRESSION IN THIS AREA. THE CONTRACTOR SHALL COVER THE STOCKPILED MATERIALS WITH POLYETHYLENE LINERS WHEN NO ACTIVITIES ARE BEING PERFORMED IN THE STOCKPILE AREA.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRANSPORTING EXCAVATED/REMOVED MATERIALS TO THE APPROPRIATE OPCA. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE THREE DAYS NOTICE TO GE OR GE'S REPRESENTATIVE PRIOR TO TRANSPORTATION OF EXCAVATED/STOCKPILED MATERIALS TO THE OPCA. THE CONTRACTOR IS REQUIRED TO PROVIDE NO LESS THAN 32 TRUCK LOADS OF MATERIAL, CONSISTING OF NO LESS THAN 10 CUBIC YARDS PER LOAD, PER DAY WHEN TRANSPORTING MATERIALS TO THE OPCAS.
16. CONTRACTOR SHALL INSTALL AN INTERIM COVER (E.G., POLYETHYLENE SHEETING) OVER WORK AREAS WHERE EXCAVATION ACTIVITIES HAVE BEEN INITIATED BUT ARE NOT YET COMPLETED. THE INTERIM COVER SHALL BE PROPERLY ANCHORED TO RESIST WIND FORCES AND PREVENT STORMWATER FROM ENTERING SUCH WORK AREAS.
17. DRIVEWAYS, CONCRETE SURFACES, PLANTERS AND/OR OTHER ITEMS SUBJECT TO REMOVAL AND REPLACEMENT SHALL BE RECONSTRUCTED TO SIMILAR DIMENSIONS AND APPEARANCE AS THE ORIGINAL ITEM. PAVEMENT SUBJECT TO PARTIAL REMOVAL SHALL BE REMOVED VIA SAW-CUT. RESTORATION SHALL MEET ALL LOCAL AND/OR STATE BUILDING CODES. CONTRACTOR SHALL OBTAIN ALL APPROPRIATE BUILDING PERMITS ASSOCIATED WITH RESTORATION ACTIVITIES.
18. UPON BACKFILLING OF EXCAVATED AREAS, THE CONTRACTOR SHALL MAINTAIN IN PLACE OR INSTALL ADDITIONAL EROSION CONTROLS IN THE LOCATIONS INDICATED ON EACH WORK SITE DRAWING. THE EROSION CONTROLS WILL BE REMOVED BY THE CONTRACTOR WHEN REQUESTED BY GE OR GE'S REPRESENTATIVE.
19. BACKFILLED AND RESTORED AREAS WILL BE SUBJECT TO FINAL SURVEY VERIFICATION (BY THE CONTRACTOR). THE CONTRACTOR SHALL REPAIR ANY ITEMS THAT ARE NOT RESTORED TO THE LOCATIONS AND/OR ELEVATIONS REQUIRED BY THIS CONTRACT.
20. THE CONTRACTOR SHALL RESTORE TO PRE-REMEDIATION CONDITIONS ALL SUPPORT AREAS THAT ARE IMPACTED BY REMEDIATION ACTIVITIES, INCLUDING EQUIPMENT AND MATERIALS STORAGE AREAS, SOIL LOADING AND STAGING AREAS, AND PARKING AREAS.
21. ALL EQUIPMENT OPERATED WITHIN THE LIMITS OF EXCAVATION SHALL BE CLEANED PRIOR TO USE OR STORAGE ELSEWHERE ON THE SITE OR TRANSPORTED OFF-SITE. A CONTAINED/LINED WHEEL WASH AREA SHALL BE PROVIDED BY THE CONTRACTOR TO BE USED AS NECESSARY FOR CLEANING EXCAVATION EQUIPMENT AND/OR TRANSPORTATION VEHICLES PRIOR TO THEIR REMOVAL FROM THE WORK SITE. WATER USED TO CLEAN EQUIPMENT SHALL BE RESTRICTED TO AND COLLECTED WITHIN A DESIGNATED EQUIPMENT CLEANING AREA. ALL SUCH WATERS SHALL BE CONTAINERIZED AND TRANSPORTED BY THE CONTRACTOR FOR APPROPRIATE DISPOSAL/TREATMENT.
22. SELECT SITE FEATURES MAY OR MAY NOT BE SHOWN ON DRAWINGS (E.G., ADDITIONAL CONCRETE PADS, MANHOLES, ETC.). CONTRACTOR SHALL PROTECT THESE FEATURES.
23. WHEN EXCAVATING MATERIALS FROM A GIVEN AREA CONTAINING BOTH TSCA AND NON-TSCA MATERIALS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEGREGATING THESE MATERIALS (ACCORDING TO THEIR TSCA OR NON-TSCA CLASSIFICATION) FOR THE PURPOSES OF MATERIAL HANDLING, TEMPORARY STAGING, TRANSPORT, AND DISPOSAL.
24. WITHIN THE LIMITS OF EXCAVATION, THE CONTRACTOR SHALL RESTORE ALL PREVIOUSLY VEGETATED AREAS BY PLACING AND COMPACTING FILL MATERIALS (TO ACHIEVE A GRADE OF APPROXIMATELY 3 INCHES BELOW PRE-REMOVAL GRADE, WHERE APPROPRIATE), TOPSOIL, AND THEN SEED AND MULCH. DRIVEWAYS, STEPS, CONCRETE SURFACES, AND OTHER SURFACES IMPACTED BY EXCAVATION ACTIVITIES SHALL BE RESTORED TO THEIR ORIGINAL LOCATION, ELEVATION, AND CONDITION. OTHER SURFACE FEATURES SHALL BE REPLACED OR RESTORED AS INDICATED.

L: ON=*, OFF=*REF*
P: PAGESET/PLT-CDL
7/1/05 SYR-85-DMW GJD
N/20633003/CONTRACT/20633G05.DWG

Graphic Scale
40' 0 40' 80'
1"=40'

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED. **USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.**

No.	Date	Revisions	Init

Professional Engineer's Name
Professional Engineer's No.
State | Date Signed
Project Mgr. DAJ | Designed by | Drawn by DMW

BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS
RD/RA WORK PLAN FOR FORMER OXBOW AREAS A AND C

GENERAL NOTES AND DETAILS

TECHNICAL DRAWINGS

BBL Project No. 206.33
Date JUNE 2005
Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Syracuse, NY 13214
315-446-9120

Attachment B

Technical Specifications

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

ATTACHMENT B

MATERIALS & PERFORMANCE SPECIFICATIONS

Section 02200 – Earthwork

Section 02207 – Restoration of Surfaces

Section 02212 – Topsoil, Seeding, and Mulch

Section 02222 – Fill Materials

MATERIALS AND PERFORMANCE - SECTION 02200

EARTHWORK

PART 1 - GENERAL

1.01 DESCRIPTION

A. All labor, materials, services, and equipment necessary to complete the earthwork activities as depicted on the Technical Drawings and/or as directed by GE or GE's Representative.

B. Earthwork is defined to include, but is not limited to, clearing, rough grading, excavation, trenching, handling and disposal of surplus materials, maintenance of excavations, removal of water, backfilling operations, embankments and fills, and compaction.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Section MP-02207 – Restoration of Surfaces

B. Section MP-02222 – Fill Materials

C. RD/RA Work Plan, Section 6.3 – Soil Removal Activities

D. RD/RA Work Plan, Section 8.4.5 – Erosion and Sedimentation Control Measures

E. RD/RA Work Plan, Section 8.5.1 – Soil Removal and Material Handling

F. RD/RA Work Plan, Section 8.6 – Perimeter Air Monitoring

1.03 APPLICABLE CODES, STANDARDS AND SPECIFICATIONS

A. American Society for Testing and Materials (ASTM).

1.04 SUBMITTALS

None.

PART 2 - PRODUCTS

See following sections.

PART 3 - EXECUTION

3.01 UNAUTHORIZED EXCAVATION

A. The Contractor shall not be entitled to any compensation for excavations carried beyond or below the lines and subgrades prescribed on the Technical Drawings. The Contractor shall refill such unauthorized excavations at its own expense and in conformance with the provisions of this section.

B. Should the Contractor, through negligence or for reasons of its own, carry its excavation below the designated subgrade, appropriate materials specified in Section MP-02222 - Fill Materials shall be furnished and placed as backfill in sufficient quantities to reestablish existing grades. Fill material used for backfilling shall be spread and compacted in conformance with the requirements of later subsections of this section.

C. All material that slides, falls, or caves into the established limits of excavations due to any cause whatsoever, shall be removed and disposed of at the Contractor's expense and no extra compensation will be paid to the Contractor for any materials ordered for refilling the void areas left by the slide, fall, or cave-in.

3.02 BACKFILL MATERIALS

A. Fill material shall be used as specified for backfill. Requirements for off-site fill material are specified in Section MP-02222 - Fill Materials.

B. Existing on-site material, designated as "native fill" or "existing soil" material shall not be used as backfill.

3.03 GENERAL BACKFILLING REQUIREMENTS

A. Backfill shall be started at the lowest section of the area to be backfilled.

B. Drainage of the areas being backfilled shall be maintained at all times.

C. Areas to be backfilled shall be inspected and approved by GE or GE's Representative prior to backfilling operations. All unsuitable materials and debris shall be removed.

D. Backfill material shall not be placed when moisture content is too high to allow proper compaction.

E. When material is too dry for adequate compaction, water shall be added to the extent necessary.

F. Backfill material shall not be placed on frozen ground nor shall the material itself be frozen or contain frozen soil fragments when placed.

G. No calcium chloride or other chemicals shall be added to prevent freezing.

H. Material incorporated in the backfilling operation that is not in satisfactory condition shall be subject to rejection and removal at the Contractor's expense.

I. The maximum lift thickness is 8 inches (measured prior to compaction).

3.04 COMPACTION AND DENSITY CONTROL

A. Compaction and Density Control

1. For shallow fills (less than 2 feet deep), compaction shall be performed by the equipment used to backfill the excavation.

2. For fills greater than two feet, a portable compactor shall be used. A minimum of two passes shall be made over all backfilled areas.

3. If, due to rain or other causes, the material exceeds the optimum moisture content, it shall be allowed to dry, assisted if necessary, before resuming compaction or filling efforts.

4. The Contractor shall be responsible for all damage or injury done to pipes, structures, property or persons due to improper placing or compacting of backfill.

3.05 GRADING

A. After the completion of all backfill operations, the Contractor shall grade the site to match the pre-excavation lines, grades, and elevations shown on the Technical Drawings, unless otherwise directed by GE, taking into account any subsequent site restoration requirements.

3.06 EXISTING FACILITIES

A. General

1. Existing subsurface facilities may be encountered during construction of the work, or located in close proximity to the work.

2. These facilities may include, but are not necessarily limited to, sewers, drains, water mains, conduits and their appurtenances. These facilities may or may not be shown on the Technical Drawings. However, the sizes, locations, and heights or depths, if indicated, are only approximate and the Contractor shall conduct its operations with caution and satisfy itself as to the accuracy of the information given. The Contractor shall not claim nor shall it be entitled to receive compensation for damages sustained by reason of the inaccuracy of the information given or by reason of its failure to properly maintain and support such structures.

3. There may be other subsurface facilities, the existence and/or location of which are not known, such as individual water and gas services, electrical conduits, sanitary and storm sewer drains, etc. The Contractor shall consult with GE or GE's Representatives of such facilities and, if possible, shall determine, prior to construction, the location and depth of any such facilities that may exist in the area to be excavated.

4. If underground facilities are known to exist in an area but their location is uncertain, the Contractor shall exercise reasonable care in its excavation technique to avoid damage to them.

5. The Contractor shall notify Massachusetts DIGSAFE at least 72 hours prior to any site work.

B. Notification and Protection Procedures

1. Except where superseded by state or local regulations, or in the absence of any applicable regulations, the Contractor shall, at a minimum, include the following procedures in its operations:

a. Prior to Excavating:

1) Determine correct field location of all nearby underground facilities or arrange for Representatives of the utilities to locate them.

2) Notify owners of nearby underground facilities when excavation is to take place, allowing them reasonable time to institute precautionary procedures or preventive measures which they deem necessary for protection of their facilities.

3) In cooperation with owners of nearby facilities, provide temporary support and protection of those underground facilities that may be especially vulnerable to damage by virtue of their physical condition or location, or those that could create hazardous conditions if damaged.

b. Immediately notify any utility owner of any damage to its underground facilities resulting from the Contractor's operations, and arrange for repairs to be made as soon as possible.

c. In case of any emergency the Contractor shall follow the Contingency and Emergency Procedures Plan outlined in GE's Project Operations Plan. This document will be provided upon request of the Contractor.

3.07 OTHER REQUIREMENTS

A. Unfinished work

1. When, for any reason, the work is to be left unfinished, all excavations shall be filled and all roadways and watercourses left unobstructed with their surfaces in a safe and satisfactory condition.

B. Hauling Material on Street

1. When hauling material over the streets or pavement, the Contractor shall provide suitably tight-sealing vehicles so as to prevent deposits on the streets or pavements. In all cases where any materials are dropped from the vehicles, the Contractor shall clean up the same as often as required to keep the crosswalks, streets, and pavements clean and free from dirt, mud, stone, and other hauled material.

2. When hauling materials that contain PCBs or other hazardous constituents, the Contractor shall abide by all applicable federal, state, and local codes.

C. Dust Control

1. It shall be the sole responsibility of the Contractor to control the dust created by any and all of its operations to such a degree that it will not endanger the safety and welfare of the general public.

- END OF SECTION -

MATERIALS AND PERFORMANCE - SECTION 02207

RESTORATION OF SURFACES

PART 1 - GENERAL

1.01 DESCRIPTION

A. All types of surfaces, structures and appurtenances disturbed, damaged, or destroyed during the performance of the work under or as a result of the operations of the Contract, shall be restored and maintained, as specified herein or as directed by GE or GE's Representative.

B. The quality of materials and the performance of work used in the restoration shall produce a surface or feature equal to or better than the condition of each before the work began, as approved by GE or GE's Representative.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Section MP-02200 – Earthwork

B. Section MP-02212 – Topsoil, Seeding, and Mulch

C. Section MP-02222 – Fill Materials

D. Section MP-02600 – Bituminous Concrete Pavements

1.03 SUBMITTALS

A. A schedule of restoration operations shall be submitted by the Contractor for review.

1.04 SCHEDULE OF RESTORATION

A. After an accepted schedule has been agreed upon, it shall be adhered to unless otherwise revised with the approval of GE or GE's Representative.

B. The replacement of surfaces at any time, as scheduled or as directed, shall not relieve the Contractor of responsibility to repair damages by settlement or other failures.

PART 2 - PRODUCTS

2.01 DESCRIPTION

A. Any offsite topsoil shall be unfrozen, friable, natural loam and shall be free of clay lumps, brush needs, litter, stumps, stones, and other extraneous matter. The topsoil shall have an organic content between 5% and 20%, and a pH between 5.5 and 7.5.

B. Backfill and topsoil shall be certified clean by the materials supplier.

C. Topsoil shall have demonstrated by the occurrence of healthy crops, grass, or other vegetative growth, that it is reasonably well-drained and capable of supporting plant growth. Topsoil shall have less than 10 percent gravel by volume and be free of stones over ½-inch in diameter.

PART 3 - EXECUTION

3.01 LAWNS AND IMPROVED AREAS

A. The area to receive topsoil shall be graded to a depth of not less than 6 inches or as specified, below the proposed finish surface.

B. The furnishing and placing of topsoil, seed, and mulch shall be performed by the Contractor.

C. Any washout or damage which occurs prior to or after restoring surface with topsoil, seed, and mulch shall be regraded and/or repaired as necessary by the Contractor.

3.02 OTHER TYPES OF RESTORATION

A. Water courses shall be reshaped to the original grade and cross-section and all debris removed. Where required to prevent erosion, the bottom and sides of the water course shall be protected.

B. Culverts destroyed or removed as a result of the construction operations shall be replaced in like size and material and shall be replaced at the original location and grade. When there is minor damage to a culvert and with the consent of the GE, a repair may be undertaken, if satisfactory results can be obtained.

C. Fences destroyed or removed as a result of the construction operations shall be replaced in like size and material and shall be replaced at the original location.

D. All small structures (e.g., storage sheds, swing sets, etc.) that were relocated for the excavation activities will be returned to their original location or new locations chosen by the property owner.

- END OF SECTION -

MATERIALS AND PERFORMANCE - SECTION 02212

TOPSOIL, SEEDING, AND MULCH

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work under this section consists of furnishing and placing of topsoil, fertilizer, seed, mulch, erosion control matting, and maintenance of seeded areas until final acceptance.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Section MP-02200 – Earthwork

B. Section MP-02207 – Restoration of Surfaces

C. RD/RA Work Plan, Section 6.5 – Backfilling Excavations

D. RD/RA Work Plan, Section 8.5.6 – Restoration of Disturbed Vegetation

1.03 SUBMITTALS

A. Analysis of the seed (to demonstrate compliance with the seed mix identified in Section 2.01D of this specification) and fertilizer (to identify chemical composition), and proposed application rates (to demonstrate compliance with the fertilizer application rate identified in Section 3.01B of this specification).

B. Should hydroseed be used, the Contractor shall submit all data including material and application rates and methods.

C. Sample of topsoil to be tested by GE for chemical contaminants as discussed in this Work Plan, Section 6.5 – Backfilling Excavations.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Any offsite topsoil shall be unfrozen, friable, natural loam and shall be free of clay lumps, brush needs, litter, stumps, stones, and other extraneous matter. The topsoil shall have an organic content between 5% and 20%, and a pH between 5.5 and 7.5.

B. Fertilizer shall be a standard quality commercial carrier of available plant food elements (i.e., a complete prepared and packaged material containing a minimum of 5% nitrogen, 10% phosphoric acid, and 10% potash).

1. Each bag of fertilizer shall bear the manufacturer’s guaranteed statement of analysis.

C. Seed mixtures shall be of commercial stock of the current season’s crop and shall be delivered in unopened containers bearing the guaranteed analysis of the mix. All seed shall meet the State standards of germination and purity.

D. Seed mix to be used in vegetated areas shall consist of the following mixture: 65% Kentucky Blue Grass, 20% Perennial Rye Grass, and 15% Fescue. The seed mixture will be seeded at a rate of 150 pounds per acre.

E. Mulch shall be stalks of oats, wheat, rye, or other approved crops free from noxious weeds and coarse materials.

F. Temporary erosion control matting shall be S75 as manufactured by North American Green, or equivalent.

G. Permanent erosion control matting shall be P300P as manufactured by North American Green, or equivalent.

PART 3 - EXECUTION

3.01 INSTALLATION

A. The topsoil shall be applied in a single loose lift and shall have a final minimum thickness of 6 inches. No compaction is required or allowed. Following placement of topsoil and prior to fertilizer application, all stones greater than 1-inch in diameter, sticks, and other deleterious material shall be removed.

B. The fertilizer shall be applied to the surface uniformly at the rate of 20 pounds per 1,000 square feet.

1. Following the application of the fertilizer and prior to application of the seed, the topsoil shall be scarified to a depth of at least 2 inches with a disk or other suitable method traveling across the slope if possible.

a. After the soil surface has been fine-graded, the seed mixture shall be uniformly applied upon the prepared surface with a mechanical spreader at a rate specified by the seed manufacturer.

b. The seed shall be raked lightly into the surface.

c. Seeding and mulching shall not be done during windy weather.

d. Mulch (where used) shall be hand or machine spread to form a continuous blanket over the seed bed, approximately 2 inches in uniform thickness at loose measurement with a minimum of 90% surface coverage. Excessive amounts or bunching of mulch shall not be permitted.

e. Unless otherwise specified, mulch shall be left in place and allowed to decompose.

2. Any mulch that has not disintegrated at time of first mowing shall be removed.

    a. Seeded areas shall be watered as often as required to obtain germination and to obtain and maintain a satisfactory sod growth. Watering shall be performed in such a manner as to prevent washing out of seed and mulch.

    b. Hydroseeding may be accepted as an alternative method of applying fertilizer, seed, and mulch. The Contractor must submit all data regarding materials and application rates to GE or GE's Representative for review.

    c. Temporary and permanent erosion control matting shall be installed in accordance with manufacturer's specifications.

3.02 MAINTENANCE

A. All erosion rills or gullies within the topsoil layer shall be filled with additional approved topsoil, graded smooth, and re-seeded and mulched.

B. The Contractor shall also be responsible for repairs to all erosion of the seeded areas until all new grass is firmly established and reaches a height of not less than 4 inches. All bare or poorly vegetated areas must be re-seeded and mulched.

- END OF SECTION -

MATERIALS AND PERFORMANCE - SECTION 02222

FILL MATERIALS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work under this section shall include, but not necessarily be limited to, supplying all labor and materials, excavating, transporting, dumping, spreading, and compacting fill material in the locations and to the depth shown on the Technical Drawings and/or as directed by GE or GE's Representative.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Section MP-02200 – Earthwork

B. RD/RA Work Plan, Section 6.5 – Backfilling Excavations

C. RD/RA Work Plan, Section 8.5.3 – Backfilling of Excavations

1.03 APPLICABLE CODES, STANDARDS, AND SPECIFICATIONS

A. American Society for Testing Materials (ASTM).

B. American Association of State Highway and Transportation Officials (AASHTO).

C. Massachusetts Highway Department Standard Specifications for Highways and Bridges (MHD).

1.04 SUBMITTALS

A. Sieve analysis of all granular materials.

B. Sample of soil to be tested for chemical contaminants as discussed in this Work Plan, Section 6.5 – Backfilling Excavations.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Soil fill material shall be free from excessive moisture, frost, stumps, trees, roots, sod, muck, marl, vegetable matter, or other unsuitable materials, and demonstrated to be clean based on chemical analysis. Soil fill shall consist of clean common earth fill, free from organic material, coatings, sharp angular stones, and other deleterious materials, and shall have a maximum particle size of 3 inches. Soil fill shall have the following gradation by weight:

Sieve	Percent Passing
3 inch	100
No. 200	10-30

B. Backfill material shall be inspected prior to placement and all roots, vegetation, organic matter, or other foreign debris shall be removed.

C. Stones shall not be allowed to form clusters with voids.

PART 3 - EXECUTION

3.01 FILL PLACEMENT

A. In general, fill material shall be placed and compacted in horizontal layers not exceeding those thicknesses indicated in Section MP-02200 - Earthwork. Subgrade that will receive fill material shall be first approved by GE or GE's Representative. Fill material shall not be placed in areas that will not support the weight of construction equipment.

3.02 CRITERIA AND TOLERANCES

A. Fill material shall be constructed to such heights as to make allowance for post-construction settlement. Any settlement that occurs before final acceptance of the Contract shall be corrected to make the backfill conform to the required lines and grades.

- END OF SECTION -

Attachment C

Contractor Submittal Form

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

ATTACHMENT C
CONTRACTOR SUBMITTAL TRACKING FORM

FINAL RD/RA WORK PLAN FOR FORMER OXBOW AREAS A AND C
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

Item No.	Submittal Description	Specification Reference (see Note 2)	Date Received	Review Conducted by:		Interim Status/Date (see Note 1)	Final Status/Date (see Note 1)	Notes
				GE Project Manager	Design Engineer			
1	Operations Plan - The Plan shall address, but not be limited to the following items:	Section 7.3						
	List of Equipment to be used on-site.	Section 7.3						
	Residential property protection procedures.	Section 7.3						
	Work Schedule	Section 7.3						
	The Contractor's proposed plan for controlling vehicular and pedestrian traffic while performing construction and operational activities..	Section 7.3						
	Proposed excavation stabilization measures.	Section 7.3						
	The Contractor's qualifications package (if requested by GE).	Section 7.3						
	Stormwater (including run-on and run-off), erosion, noise, and dust control	Section 7.3						
	The Contractor's proposed excavation approach	Section 7.3						
	Materials handling and staging approach.	Section 7.3						
	Equipment cleaning procedures.	Section 7.3						
2	Health and Safety Plan - The Plan shall address, but not be limited to the following items (Refer to Note 3):	Section 7.3						
	Identification of Key Personnel	Section 7.3						
	Training	Section 7.3						
	Medical Surveillance	Section 7.3						
	Site Hazards	Section 7.3						
	Work Zones	Section 7.3						
	Personal Safety Equipment and Protective Clothing	Section 7.3						
	Personal Air Monitoring	Section 7.3						
	Personnel/Equipment Cleaning	Section 7.3						
	Confined Space Entry	Section 7.3						
	Material Safety Data Sheets	Section 7.3						
	Construction Safety Procedures	Section 7.3						
	Standard Operating Procedures	Section 7.3						
3	Contingency Plan - The Plan shall address, but not be limited to the following items:	Section 7.3						
	Spill prevention control and countermeasures plan for all materials brought on site.	Section 7.3						
	Emergency vehicular access/egress.	Section 7.3						
	Evacuation procedures of personnel from the work sites.	Section 7.3						
	For work sites that include or are adjacent to a surface water drainage way, a flood control contingency plan to identify measures to protect the work site(s) and the waterway from impacts in the event of a high water and/or flood conditions.	Section 7.3						
	List of all contact personnel with phone numbers and procedures for notifying	Section 7.3						
	Routes to local hospitals	Section 7.3						
	Identification of responsible personnel who will be in a position at all times to receive incoming phone calls and to dispatch Contractor personnel and equipment in the event of an emergency situation.	Section 7.3						
4	Identification of backfill sources and locations and analytical data for samples collected from each source (unless the source(s) have already been approved based on previously submitted analytical data).	Section 5.5/7.3						
5	Record Drawings to document any deviations from the work specified in the RFP. Deviations shall be noted on the Record Drawings as soon as possible following their identification by the Contractor, GE, or GE's Representative.	Section 8.2						

ATTACHMENT C
CONTRACTOR SUBMITTAL TRACKING FORM

FINAL RD/RA WORK PLAN FOR FORMER OXBOW AREAS A AND C
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

Item No.	Submittal Description	Specification Reference (see Note 2)	Date Received	Review Conducted by:		Interim Status/Date (see Note 1)	Final Status/Date (see Note 1)	Notes
				GE Project Manager	Design Engineer			
6	Daily Construction Reports prepared by GE's Representative will include documentation of problems and/or deficiencies noted during construction (e.g., when construction material or activity is observed or tested that does not meet the specified requirements), and corrective action employed to address the problems or deficiencies. The documentation reports will be cross-referenced to the reports, data sheets, forms, and check lists that contain data or observations leading to the determination of a problem or deficiency. Problem and deficiency identification and	--						
7	Restoration of Surfaces - A schedule of restoration operations.	Materials and Performance - Section 02207 (1.03)(A)						
8	Fill Materials - Sieve analysis of all granular materials.	Materials and Performance - Section 02222 (1.04)(A)						
9	Fill Materials - Sample of backfill materials to be tested for chemical contaminants as discussed in this Work Plan.	Materials and Performance Section 02222 (1.04)(B)						
10	Topsoil, Seeding, and Mulch - Analysis of the seed and fertilizer, and proposed application rates.	Materials and Performance Section 02212 (1.03)(A)						
11	Topsoil, Seeding, and Mulch - Should hydroseed be used, the Contractor shall submit all data including material and application rates.	Materials and Performance - Section 02212 (1.03)(B)						
12	Topsoil, Seeding, and Mulch - Sample of topsoil to be tested by GE for chemical contaminants.	Materials and Performance Section 02212 (1.03)(C)						

Notes:

1. Submittal status nomenclature is as follows:
   - R - Reviewed
   - N - Reviewed and noted
   - S - Resubmit
   - J - Rejected

2. All Section, Specification, and Drawing references are to the *Final Work Plan* (BBL, April 2005).

3. The Health and Safety Plan is required for GE record-keeping purposes only and therefore GE and BBL will conduct a review of the plan for completeness only. Determination of the appropriate level of worker safety, equipment, and procedures based on site conditions must be made by the Contractor based on site visits, review of available information, and anticipated site activities.

4. Shaded item numbers indicate submittals required by GE but not subject to submittal to EPA as part of the supplemental information package.

Attachment D

Ambient Air Monitoring Program

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

SCOPE OF WORK

for

Ambient Air PCB & Particulate Monitoring at the Former Oxbow Areas A and C

General Electric Company
Pittsfield, Massachusetts

Prepared by

Berkshire Environmental Consultants, Inc.
152 North Street, Suite 250
Pittsfield, MA 01201

June 2005

TABLE OF CONTENTS

1.0 INTRODUCTION

This Scope of Work (SOW) describes the ambient air monitoring for polychlorinated biphenyls (PCBs) and particulate matter which will be conducted during soil remediation actions at the Former Oxbow Areas A and C in Pittsfield, Massachusetts. Soil removal will be taking place at Parcels I8-23-16, I8-23-8, I9-5-4 and I9-5-14. These properties are located along the east bank of the Housatonic River between the River and Elm Street in Pittsfield.

2.0 SAMPLING OBJECTIVE

The objectives of this sampling program are two-fold:

1. To obtain valid and representative data on ambient levels of PCBs around the remedial site before and during remedial activities to insure that the activities are not causing an unacceptable increase in ambient air concentrations of PCB.

2. To obtain valid and representative data on ambient levels of particulate around the remedial site before and during soil remediation activities to insure that the remedial activities are not causing an unacceptable increase in ambient air concentrations of particulate.

3.0 SITE ACTIVITY

As described in the Final Work Plan, the on-site activities to be performed at the Former Oxbow Areas A and C properties include the performance of soil removal/replacement at the residential and recreational properties identified above. It is anticipated that the remediation activities described in the Final Work Plan will be performed as one continuous phase of work. Performance of the remediation work presented in the Final Work Plan is subject to review and approval by the United States Environmental Protection Agency (US EPA) and the Massachusetts Department of Environmental Protection (MA DEP) (together, the Agencies), as well as execution of owner access agreements.

This ambient air monitoring program includes particulate and PCB monitoring during soil remediation activities.

4.0 PCB MONITORING PROGRAM

4.1 *High Volume PCB Sampling*

The high volume PCB sampling program will include the following elements:

High-Volume Monitoring Locations	3
Background Sites	1
Co-Located Sites (Field Duplicates)	1
Sampling Time	24 hours per sampling event
Sampling Period	Duration of soil remediation activity
Frequency of Sampling	Twice prior to the onset of soil remediation activity and once every four weeks during remediation activity*
No. of Blanks Per Sampling Event	1
Sampling Method	EPA Compendium Method TO-4A
Analytical Method	GC/ECD or GC/MS as described in EPA Method TO-4A

* Sampling frequency may be increased if either PCB or particulate monitoring levels exceed threshold values.

Ambient air monitoring for PCBs will be conducted during soil remediation activities. Sampling will be conducted for two 24-hour periods prior to the initiation of remediation and will proceed once every 4 weeks during soil remediation. At least one 24-hour PCB sampling event will be performed during remediation activity. The ambient air monitoring frequency for PCBs may be increased to bi-weekly in the event that ambient particulate concentrations at any one location consistently exceed the proposed particulate notification level (i.e. >120 $\mu g/m^3$). "Consistently exceeding" will be defined as concentrations greater than 120 $\mu g/m^3$ on three consecutive 10-hour days or 5 days in any two-week period. Once PCB concentrations are below PCB action levels (see Section 10 of this Scope of Work) for two consecutive bi-weekly events, then PCB sampling frequency will revert to once every four weeks.

PCB background monitoring will be conducted prior to any on-site soil remediation activity at three locations on the perimeter of the removal action area for the Former Oxbow Areas A and C (shown on Figure 3). During soil remediation activity, PCB monitoring will be conducted at three locations surrounding the activity and at one background location near Gate 31 on Woodlawn Avenue on the GE property in Pittsfield. Preliminary monitoring sites have been identified for the soil remediation activity (as shown on Figure 3). Monitoring locations Ox-1, Ox-2 (2a, 2b or 2c)[1], and Ox-3 will be

[1] Either site Ox-2a, Ox-2b, or Ox-2c will be used as the representative location depending on the area of site activity for that day.

utilized for PCB monitoring during soil removal activities. Location Ox-2 will be adjusted during remediation activities to sites Ox-2a, Ox-2b, or Ox-2c to the most representative location during field sampling activities depending on the area of site activity for that day. The locations will be noted and reported in the final project report. The preliminary locations of the monitors were selected based firstly on both wind direction and the location of potential receptors, and secondly on the presence of obstructions and other influences (such as truck traffic) that may adversely affect the representativeness of the data. The predominant wind direction is west-northwest based on five- and ten-year wind rose data from the Albany, NY NWS station. Data from the GE owned station at the GE site in Pittsfield, MA also demonstrate a predominant WNW wind direction, however the data from the local station also show that the local wind direction and speed vary considerably. Therefore, air monitors have generally been placed in locations that will facilitate good downwind coverage, i.e. E or ESE of the construction activity, but also provide adequate coverage between the areas of construction and potential receptors regardless of wind direction.

The specific sampling locations for monitors may be modified based on the location and nature of the soil remediation activity, predominant wind direction, the location of potential receptors, physical obstructions (i.e. trees, buildings), the availability of power, site security, site accessibility, etc. Any significant modifications to the locations of monitors will be reviewed with the GE Project Manager.

The detection limit (DL) for PCB analysis of the high volume samples will be 0.0003 $\mu g/m^3$, in consideration of the following:

Avg. Sampling Rate	0.225 m^3/min.
Avg. Sample Volume	324 m^3/PUF
Analytical DL	0.1 µg/PUF
Project DL	0.0003 $\mu g/m^3$

The sampling method to be used for PCBs in the high volume samples is US EPA Compendium Method TO-4A, Determination of Pesticides and Polychlorinated Biphenyls in Ambient Air Using High Volume Polyurethane Foam (PUF) Sampling Followed by Gas Chromatographic/Multi-Detector Detection (GC/MD). This method employs a modified high volume sampler consisting of a glass fiber filter with a polyurethane foam (PUF) backup adsorbent cartridge to sample ambient air at a rate of 0.225 m^3/min. A General Metal Works Model GPS-1 Sampler or equivalent will be used. The filter and cartridge will be placed in clean, sealed containers and returned to the laboratory for analysis.

Procedures for sample media preparation and calibration of the sampling system are specified in Method TO-4A. TO-4A further specifies procedures for calculation and data reporting, and the assessment of data for accuracy and precision.

The samplers will be monitored at six-hour intervals over each 24-hour sampling period. During these six-hour checks, barometric pressure, temperature, and magnehelic pressure readings will be taken and the air flow adjusted to the target flow rate, as necessary. At the end of the sampling period, the sampling modules containing the fiber filters and PUF adsorbents will be removed from the samplers. Each glass fiber filter will be folded and placed on the PUF adsorbent for that sample and each sample consisting of a fiber filter and PUF adsorbent (inside a glass cartridge) will be wrapped in hexane rinsed aluminum foil. Each fiber filter and PUF adsorbent set will be labeled as one sample. The samples will be wrapped, packaged in blue ice and sent under chain-of-custody to the laboratory for analysis.

The PCB sampling probe height for all high volume monitors will be approximately 2.0 meters above the ground. This height is adequate to represent the breathing zone and to be above the influence of ground activity around the monitor. The location of the samplers will be in conformance, to the extent practical, with the siting requirements for ambient monitors in Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD), U.S. EPA. May, 1987.

4.2 *Analytical Procedures*

In the high volume samples, the PCBs will be recovered by Soxhlet extraction with 10% diethyl ether in hexane. The extracts will be reduced in volume using Kuderna-Danish (K-D) concentration techniques and subjected to column chromatographic cleanup. The extracts will be analyzed for PCBs using gas chromatography with either electron capture detection (GC/ECD) or mass spectrometry detection (GC/MS) as described TO-4A.

The samples will be analyzed for the following PCB Aroclors:

PCB-1016	PCB-1221
PCB-1232	PCB-1242
PCB-1248	PCB-1254
PCB-1260	

5.0 PARTICULATE MONITORING

Ambient air monitoring for particulate matter will be conducted during all soil remediation activities. Specifically, real-time ambient particulate monitoring will be performed during all active on-site soil remediation activities. Such monitoring will be conducted at three on-site locations, which will vary as site activities progress, and at one background location at Gate 31 off Woodlawn Avenue on GE property in Pittsfield, Massachusetts. Preliminary monitoring sites have been identified in Figure 3 (see the discussion of monitoring locations in Section 4.0 of this Scope of Work). The specific locations for stations have been preliminarily selected based on the location and nature of the soil remediation activities, predominant wind

direction, location of potential receptors, availability of power, site accessibility, and site security. Any significant modifications to the locations of monitors will be reviewed with the GE Project Manager.

At the background and at least one on-site location, real-time particulate monitoring will be performed using a MIE dataRAM Model DR-2000/4000 real time particulate monitor or equivalent. Each Model DR-2000/4000 monitor or equivalent is equipped with a temperature conditioning heater and in-line impactor head to monitor and record particulate concentrations with a mean diameter less than 10 micrometers (PM_{10}). At the remaining two on-site locations, real-time particulate monitoring will be performed using a MIE dataRAM Model pDR-1000 or equivalent. Particulate monitoring will typically be conducted at all sites for approximately 10 hours daily, from 7 a.m. to 5 p.m., during soil remediation activities. Additional site activities may warrant a longer monitoring period. Particulate data will be recorded and averaged by the instruments' dataloggers every 15 minutes.

Calibrations and maintenance will be conducted at the frequency and in accordance with the procedures recommended by the manufacturer. All calibrations will be recorded.

6.0 QUALITY ASSURANCE AND QUALITY CONTROL PROCEDURES

Quality assurance and quality control (QA/QC) procedures for the PCB air sampling program follow those described in the Ambient Air Monitoring Plan contained in the GE Project Operations Plan (AAMP/POP) and Method TO-4A. Quality assurance and quality control for the particulate sampling will be based on manufacturer's recommendations.

7.0 PCB SAMPLE DOCUMENTATION, HANDLING AND SHIPMENT

Each filter holder and PUF cartridge holder will be pre-marked with a permanent identification number. As each sample is collected, it will be recorded on a field data form along with the date, time and location of collection.

All samples will be securely wrapped for shipment. PCB samples will be preserved at $4^{o}C$ and shipped on blue ice. Samples will be shipped under chain-of-custody by commercial overnight carrier or courier to the analytical laboratory. Complete details on the PCB sample shipment procedures are contained in the AAMP/POP.

8.0 METEOROLOGICAL MONITORING

Hourly meteorological data from the Automated Surface Observation System (ASOS) Monitor operated at the Pittsfield Municipal Airport in Pittsfield, Massachusetts will be included with the sampling results. This ASOS Monitor is operated by the National Weather Service, Federal Aviation Administration, and the Department of Defense. The ASOS Monitor measures and records wind speed, wind direction, precipitation, temperature, sky conditions, barometric pressure, and relative humidity.

9.0 DOCUMENTATION AND REPORTING

Particulate data will be summarized and reported to the GE Project Manager and the Blasland, Bouck & Lee (BBL) Project Manager. If there is an exceedance of a reporting threshold, GE will be notified as soon as possible. All field and laboratory data recorded during ambient monitoring will be documented according to the procedures in the AAMP/POP. A written report summarizing the results will be provided to GE and BBL after the conclusion of sampling and will include the following:

Date and Time of Sampling
Sampling Locations
Calibration and Maintenance Activities
Pollutants Monitored
Number of Samples Collected
Analytical Results
Quality Assurance Assessment
Meteorological Data Summary
Discussion of Problems or Disruptions

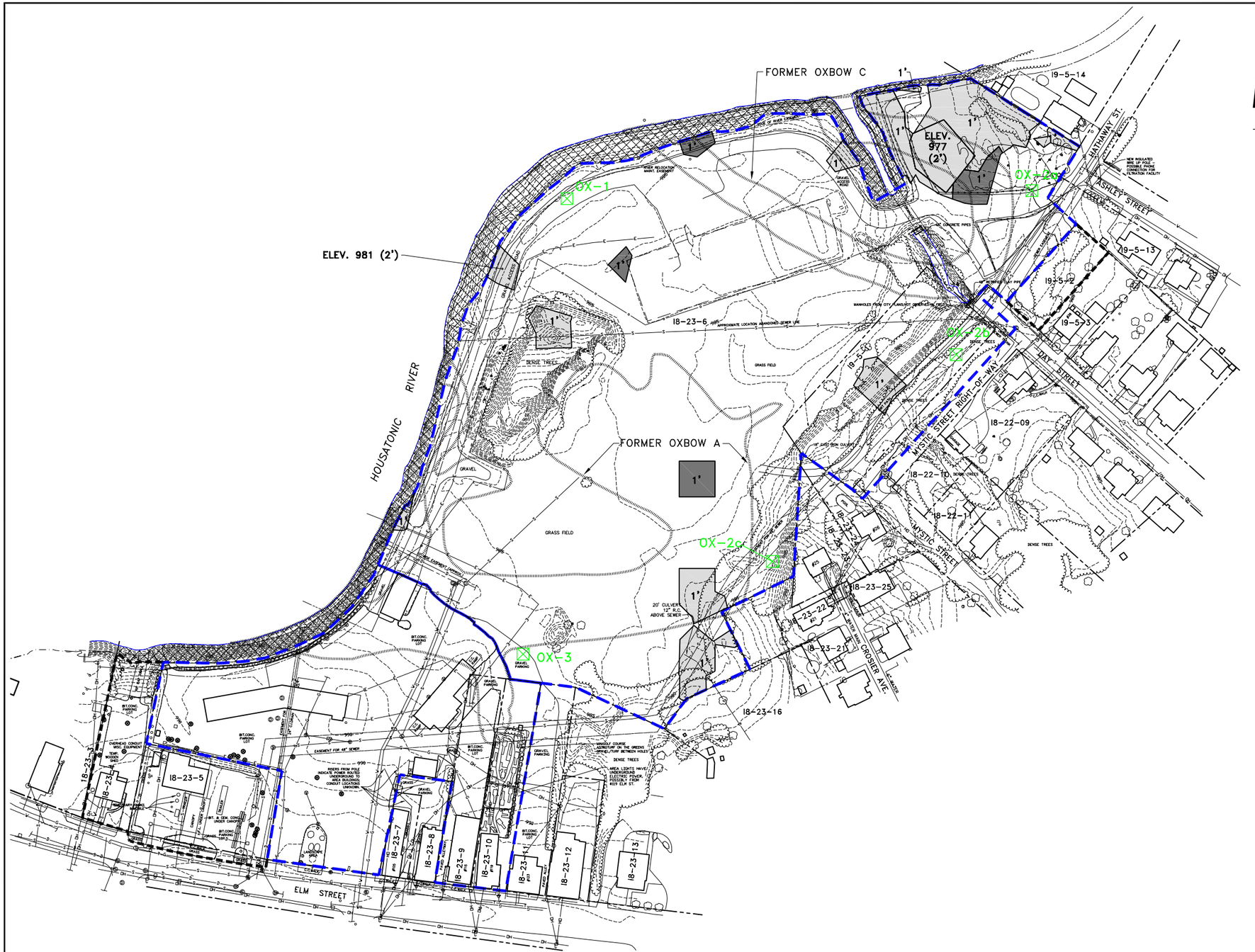
10.0 ACTION LEVELS

10.1 *PCBs*

The notification and action levels for PCB concentrations in ambient air are 0.05 $\mu g/m^3$ (24-hour average) and 0.1 $\mu g/m^3$ (24-hour average), respectively. These are the same levels established by EPA for the other remediation activities in Pittsfield. Any exceedance of the notification level will be immediately reported to the GE Project Manager.

10.2 *Particulate Matter*

For each day of monitoring, the particulate data from the on-site monitors will initially be compared with the data from the background monitor. If the average 10-hour PM_{10} concentration at any on-site monitor exceeds the average concentration at the background monitor, the on-site concentrations will then be compared with the notification level of 120 $\mu g/m^3$ (micrograms per cubic meter) -- which represents 80 percent of the current 24-hour National Ambient Air Quality Standard (NAAQS) for PM_{10} (150 $\mu g/m^3$). This level has been selected to allow notice to GE before concentrations reach the level of the 24-hour NAAQS. Any exceedances of the notification level or the NAAQS will be immediately reported to the GE Project Manager.



LEGEND:

- APPROXIMATE PROPOSED AMBIENT AIR PCB AND PARTICULATE MONITORING LOCATIONS
- APPROXIMATE ORIGINAL REMOVAL ACTION AREA BOUNDARY
- AVERAGING AREA BOUNDARY
- MODIFIED REMOVAL ACTION AREA BOUNDARY (PROPERTIES 18-23-4 AND 18-23-5 ADDED TO THE RAA FOR THE PURPOSE OF ADDRESSING PCBS ONLY)
- PROPERTY BOUNDARY
- 18-23-6 PROPERTY ID
- EDGE OF WATER
- VEGETATION
- APPROXIMATE FORMER OXBOW/LOW LYING AREA
- AREA INCLUDED AS PART OF 1 1/2-MILE REACH REMOVAL ACTION
- LIGHT POLE
- UTILITY POLE
- CATCH BASIN
- DRAIN MANHOLE
- SANITARY MANHOLE
- TELEPHONE MANHOLE
- WATER SHUTOFF
- 985 INDEX ELEVATION CONTOUR
- INTERMEDIATE ELEVATION CONTOUR
- WOODEN FENCE
- X WIRE FENCE
- CHAIN LINK FENCE
- GUARDRAIL
- G GAS SERVICE
- W WATER SERVICE
- S SANITARY SEWER
- E ELECTRIC SERVICE
- D STORM DRAIN LINE
- T TELEPHONE SERVICE
- OH OVERHEAD WIRES
- TSCA REMOVAL (SEE NOTE 3)
- NON-TSCA REMOVAL (SEE NOTE 3)

NOTES:

1. REFER TO DRAWING 1 FOR ADDITIONAL BASEMAP INFORMATION AND CONTRACTOR REQUIREMENTS.
2. AREAS DESIGNATED AS 1' WILL BE SUBJECT TO SOIL REMOVAL ACTIVITIES TO A DEPTH OF 1 FOOT BELOW GROUND SURFACE. ALL OTHER EXCAVATIONS SHALL EXTEND TO THE SPECIFIED ELEVATION. (DEPTHS SHOWN IN PARENTHESES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY).
3. EXCAVATED MATERIALS SPECIFIED HEREIN AS TSCA TO BE DISPOSED OF AT THE BUILDING 71 OPCA. ALL OTHER EXCAVATION MATERIALS SPECIFIED HEREIN TO BE DISPOSED OF AT THE HILL 78 OPCA.
4. TREES AND RIPRAP WITHIN THE LIMITS OF EPA's HOUSATONIC RIVER EXCAVATION SHALL BE PROTECTED OR RESTORED TO EXISTING CONDITION.
5. CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES IN THE VICINITY OF UTILITY POLES THROUGHOUT THE IMPLEMENTATION OF REMOVAL ACTIONS.
6. THE CONTRACTOR SHALL SHEAR/SHRED ALL TREES AND SHRUBS (INCLUDING ROOTS) REMOVED DURING THE PERFORMANCE OF RESPONSE ACTIONS FOR TRANSPORTATION TO THE BUILDING 71 OPCA.

0 75' 150'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
SCOPE OF WORK FOR AMBIENT AIR PCB PARTICULATE MONITORING FORMER OXBOW AREAS A AND C

PROPOSED AMBIENT AIR PCB AND PARTICULATE MONITORING LOCATIONS

BBL BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE
D-1

X: 20633X02A.DWG
L: ON=*, OFF=REF
P: PAGESET/PLT-CDL2B1
7/05/05 SYR-85-DMW PGL GJD
N/20633003/20633G04.DWG

Attachment E

Post-Removal Site Control Plan

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

Attachment E – Post-Removal Site Control Plan

In accordance with Section 3.7 of the *Statement of Work for Removal Actions Outside the River* (SOW), which is Appendix E of the CD, and as required in Technical Attachment J of the SOW, this Post-Removal Site Control Plan (PRSCP) describes the future inspection, maintenance, and repair activities (I/M activities) to be conducted at Former Oxbow Areas A and C. These activities will be focused on soil removal and replacement activities that will be performed at Parcels I8-23-6 and I9-5-2. These I/M activities will be conducted on a semi-annual basis and will consist of the activities specified in Section 2.3 (related to backfilled/restored areas) of Technical Attachment J of the SOW. Section 2.3 provides that I/M activities to be conducted for vegetated covers in areas of soil removal are to be the same as those discussed for soil covers within non-inundated areas (as specified in Section 2.2 of that same document). These I/M activities for Former Oxbow Areas A and C are further described below.

Semi-Annual Inspection, Maintenance, and Repair Activities

GE will initiate post-construction inspections of areas that were backfilled/restored at Former Oxbow Areas A and C following completion of the construction activities. The first inspection of the restored surfaces will be performed approximately one month after completion of construction activities. Thereafter, these areas will be inspected every 6 months for a period of 2 years (subject to subsequent EPA approval of a different frequency). At a minimum, these inspections will include visual observations of the following: (a) erosion controls to verify their continued effectiveness until such time vegetation is sufficiently established; (b) any areas where excessive settlement has occurred relative to the surrounding areas; (c) any drainage or growth problems due to possible over-compaction of the backfill materials; and (d) other conditions that could jeopardize the completed remediation.

Inspections are anticipated to occur in May and October of each year to ensure that the vegetation is growing as anticipated and is providing the desired degree of erosion control.

GE will be responsible for maintenance and repair of site conditions and features as necessary to meet the requirements of the CD and SOW. Such activities will include addressing any conditions noted during the periodic inspections. Examples of maintenance/repair activities that may be identified and conducted as a result of the periodic inspections include, but are not limited to, placement of additional topsoil in areas of erosion or settlement and repair or replacement of any components of the backfilled/restored areas exhibiting deficiencies

or potential problems. If needed, additional planting or seeding will be performed to replace dead or dying vegetation.

Following each inspection described above, an inspection report will be prepared and submitted to EPA. Any conditions noted as a result of periodic inspections will be addressed as soon as practicable. The nature of the associated maintenance/repair will be documented in the subsequent inspection report. As required by Attachment J of the SOW, these reports will include the following information (as relevant):

- Description of the type and frequency of inspection and/or monitoring activities conducted;
- Description of any significant modifications to the inspection and/or monitoring program made since submittal of the preceding monitoring report;
- Description of any conditions or problems noted during the inspection and/or monitoring period which are affecting or may affect the completed remediation;
- Description of any measures taken to correct conditions affecting the performance of the response action;
- Results of any sampling analyses and screening conducted as part of the inspection and/or monitoring program; and
- Description of any measures that may need to be performed to correct any conditions affecting the completed response actions.

Contact Information

In accordance with Section 2.0 of Technical Attachment J of the SOW, provided below is the name and contact information for the person who will be responsible for conducting I/M activities at Former Oxbow Areas A and C. The individual shown below may change during the period that this PRSCP is in effect.

Name	Company/Entity	Telephone Number
Richard W. Gates	General Electric Company	(413) 448-5909